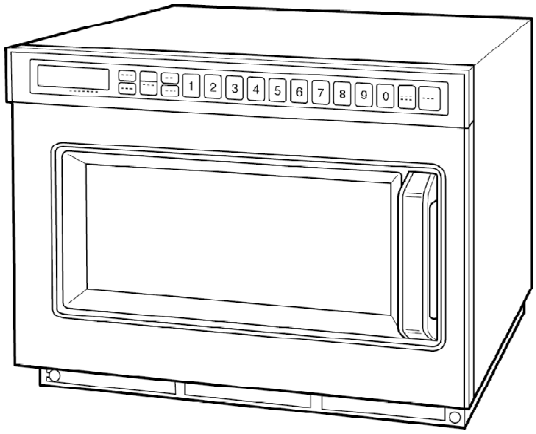
ORDER NO. MOD0009238C1

E10

Service Manual

Commercial Microwave Oven

NE-1257R / NE-1257CR / NE-1757R / NE-1757CR / NE-2157R / NE-2157CR / NE-1258R



SPECIFICATIONS

Specifications

Models:	NE-1258R NE-1257R	NE-1257CR	NE-1757R	NE-1757CR	NE-2157R/CR
Power Source:	120 V AC Single Phase 60 Hz		208/230 V AC Single Phase 60 Hz		
Power Requirement:	2000 W. (17.7A)	1950 W. (17.2A)	2650 W. (14.3A) 208 V 2720 W. (13.3A) 230 V	2600 W. (13.8A) 208 V 2500 W. (12.3A) 230 V	3200 W. (16.6A) 208 V 3300 W. (15.3A) 230 V
*High frequency Output: HIGH MED LOW	1200 W 600 W 340 W		1700 W 850 W 340 W		2100 W 1050 W 340 W
Microwave Frequency:	2,450 MHZ				
Timer:	Maximum programmable time for single stage heating HI and MED power = 15 min. DEF = 30 min.				
Outside Dimensions:	16 5/8" (W) X 20" (D) X 13 3/16" (H) 422 mm (W) X 508 mm (D) X 337 mm (H)				
Inside Dimensions:	13" (W) X 12 3/32" (D) X 6 7/8" (H) 330 mm (W) X 310 mm (D) X 175 mm (H)				
Weight:	58 lbs/26.3 kg		62 lbs/28.3 kg		65 lbs/29.5 kg
*Output power: IEC705-88 Test procedure					
Specifications subject to change without notice.					

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

WARNING

1. This product should be serviced only by trained qualified personnel.
2. Though this product has been manufactured in compliance with:
   "Federal Performance Standard 21 CFR Subchapter J" (D.H.H.S.): U.S.A. models
   or "Radiation Emitting Devices Act" (Health and Welfare Canada): Canadian models
   It is very important all repairs should be made in accordance with procedures described in this manual to avoid being exposed to excessive microwave radiation.
3. Check for radiation leakage before and after every servicing according to the "procedure for measuring radiation leakege".
4. If the unit cannot be repaired on site, advise the customer not to use until unit be repaired.
5. Any serviceman who learns of any accident pertaining to microwave radiation leakage including the oven operating with open door should immediately notify the appropriate address listed below and Center for Devices and Radiological Health, DHHS.

IN U.S.A. (PHCC)	Panasonic Home & Commercial Products Company One Panasonic Way, Panazip: 4A-5 Secaucus, New Jersey 07094 Attention: Service Engineering	IN PUERTO RICO (PSC)	PSC San Gabriel Industrial Park 65th Infantry Ave. Km. 9.5. Carolina, Puerto Rico 00985 (809) 750-4300
		IN CANADA (PCI)	Panasonic Canada Inc. 5770 Ambler Drive, Mississauga, Ontario, L4W2T3 (905) 624-5010

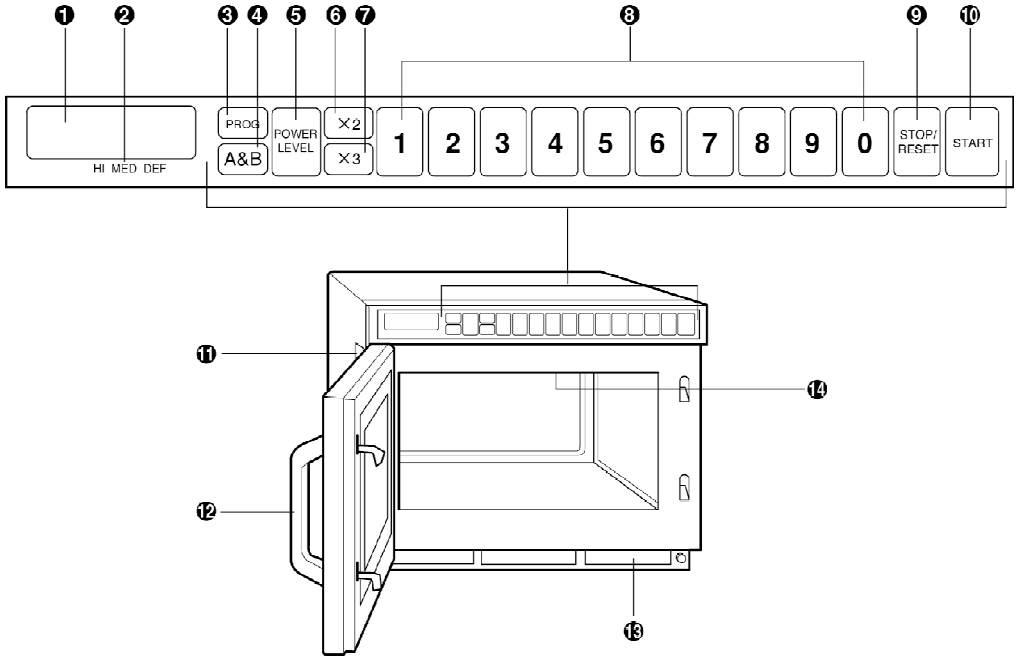
6. There are special components used in the microwave oven which are important for safety. These parts are marked with a ⚠ on the replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent microwave leakage, shock, fire, or other hazards. Do not modify the original design.

PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

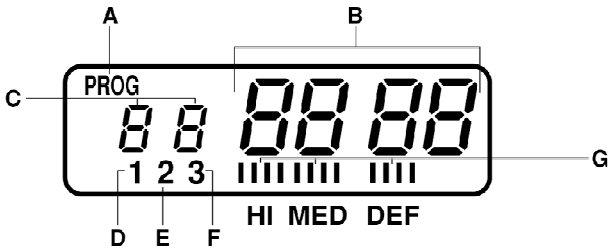
(A) Do not operate or allow the oven to be operated with the door open.
(B) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary:
   (1) Interlock operation
   (2) Proper door closing
   (3) Seal and sealing surfaces (arcing, wear, and other damage)
   (4) Damage to or loosening of hinges and latches
   (5) Evidence of dropping or abuse
(C) Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, waveguide or transmission line, and cavity for proper alignment, integrity and connections.
(D) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.
(E) A microwave leakage check to verify compliance with the Federal Performance Standard should be performed on each oven prior to release to the owner.

Panasonic®

1. OUTLINE DIAGRAM



❶ Digital Display Window(see below)
❷ Power Level Indicator Display
❸ Program Pad
❹ Shift Pad
❺ Power Level Selector Buttons
❻ Double Quantity Pad
❼ Treble Quantity Pad
❽ Number/Memory Pads
❾ Stop/Reset Pad
❿ Start Pad
⓫ Oven Lamp Cover
⓬ Door Handle
⓭ Air Filter
⓮ Splatter Shield(top of inner cavity)



A—Program Display
B—Heating Time Display(min.sec.)
C—Memory Pad Number Display
D—1st Stage Heating Indicator
E—2nd Stage Heating Indicator
F—3rd Stage Heating Indicator
G—Power Level Indicator

2. OPERATION PROCEDURE

1. Manual heating for single stage

OPERATION	DISPLAY
1. Plug the power supply cord into wall receptacle.	
2. Open the door. Place a water load in the oven and close the door.	0
3. Tap [POWER LEVEL] pad once. (Set to High power)	1 HI
4. Set desired heating time by tapping number pads [2], [0], [0]. (Set to 2 minutes)	1 2 00 HI
5. Tap [START] pad.	1 1 59 HI
6. When the times is up, you hear 3 beeps sound.	0
7. Open the door and take out the water load. The display goes back to previously setting time.	1 2 00 HI
8. Close the door. 1 minute later, display will return blank.	

2. Manual heating for 2nd or 3rd stage

OPERATION	DISPLAY
1. Follow step 1 to 4 single stage.	1 2 00 HI
2. Tap [POWER LEVEL] pad twice. (Set to MED power)	1 2 MED
3. Set the desired heating time by tapping number pads [1], [0], [0]. (Set to 1minute)	1 2 1 00 MED
4. Tap [START] pad. (1st stage)	1 2 2 59 HI MED
5. When the 1st stage time is up, you hear 1 beep sound. (2nd stage)	2 59 MED
6. When the times is up, you hear 3 beeps sound.	0
7. Open the door and take out the water load. The display goes back to previously setting time.	1 2 3 00 HI MED
8. Close the door. 1 minute later, display will return blank.	

NOTE: For a 3rd stage heating cycle, select a further power level and time between steps 3 and 4 above.

3. Memory setting for single stage

OPERATION	DISPLAY
1. Display must be blank before programming can begin. Touch **PROG** pad.	PROG 50
2. Tap **5** pad. (Set to memory pad 5) NOE: Previously selected power and time will appear.	PROG A 5 1 50 HI
3. Tap **POWER LEVEL** pad once. (Set to High power)	PROG A 5 1 HI
4. Set the desired heating time by tapping number pads **1**,**0**,**0**. (Set to 1 minutes)	PROG A 5 1 100
5. Touch **PROG** pad again.	PROG A 5 1 100 HI
6. 3 seconds after, the display window will go blank.	

TO PROGRAM MEMORY AREA B: Follow steps 1 above. Touch the Memory Shift pad **A ► B** and a small "B" will appear beneath the flashing "PROG" .
Touch the memory pad you wish to program, and the previously selected time and power level will appear in the display window.

NOTE: Once the Memory area B has been selected it cannot be changed back to Memory area A. If you do not require Memory area B, cancel it by touching the cancel pad and begin again.

4. Memory setting for 2nd or 3rd stage

OPERATION	DISPLAY
1. Follow steps 1 to 4 for memory setting for single stage.	PROG A 5 1 100 HI
2. Tap **POWER LEVEL** pad twice. (Set to MED power)	PROG A 5 1 2 MED
3. Set the desired heating time by tapping number pads **2**,**0**,**0**. (Set to 2 minutes)	PROG A 5 1 2 200 MED
4. Touch Program pad again. Heating is displayed by adding single and 2nd stage heating time.	PROG A 5 1 2 300 HI MED
5. 3 seconds after, the display window will become blank.	

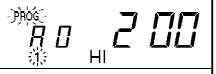
NOTE: For a 3rd stage heating cycle, select a further power level and dial in a time, between steps 3 and 4 above.

5. Memory pad heating

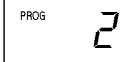
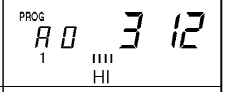
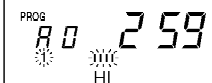
OPERATION	DISPLAY
1. Plug the power supply cord into wall receptacle.	
2. Open the door. Place a water load in the oven and close the door.	0
3. Tap **5** pad.	PROG A 5 1 2 300 HI MED
4. Tap **START** pad. (1st stage)	PROG A 5 1 2 259 HI MED
5. (2nd stage)	PROG A 5 2 159 MED
6. When the time is up, you hear 3 beeps sounds.	0
7. Open the door and take out the water load.	0
8. Close the door. Display will return blank after 1 minute.	

NOTE: When program is locked, heating can be started automatically by tapping memory pad.

6. Programming Double or Treble Quantity Pad

OPERATION	DISPLAY
1. The display window must be blank before programming can begin.	
2. Press the PROG pad.	
3. Press 0 pad. The pad number and previously selected time and power will appear.	
4. Press X2 pad. The previously programmed magnification number appear. ex. *1.5* means 1.6 times. ※**NOTE: When you want program for treble quantity heating, press X3 pad.**	
5. Set the desired magnification by pressing the appropriate number pad. ex. 1.5 times: press 1 and 5	
6. Press the PROG pad again.	
7. After 3 seconds the display will goes blank.	

7. Memory Pad Heating for Dpouble or Treble Quantity Heating

OPERATION	DISPLAY
1. Open the door place a water load in the oven and close the door.	
2. Press the X2 pad. **NOTE: When you want treble quantity heating, press X3 pad.**	
3. Press the desired memory pad. ex. memory 0 (program No.A-0)	
4. Press pad.	
5. When the time is up, you will hear 3 beeps sound.	
6. Open the door and remove the water load.	
7. Close the door 1 minute later, display will return blank.	

8. To Read the Cycle Counter

OPERATION	DISPLAY
1. Open the door and leave it open.	0
3. While pressing STOP/RESET pad, memory pad. The display shows the number of times each memory pad has been used. Within 3 seconds, pressing the "⌴" pad to show the number of times the oven has been used in the manual mode. ex: 6666 6,666 times **NOTE: To read the number of times the oven has been used in the B side programmes. Press A-B shift pad. Then while pressing the STOP/RESET pad press each memory pad.**	6666
3. Remove your finger from STOP/RESET pad and quickly close door while the display is still showing a pad's cycle count. Display will now show the total cumulative number of times the oven has been used. ex: 99999→99,999 times.	9 9999
4. 3 seconds later, the display will go blank.	

NOTE: Total cumulative number includes programming memory heating and manual heating number of times has been used. Cooking times over 99,999 times will be back 0.

9. To Activate Program Lock

OPERATION	DISPLAY
1. Plug the power supply cord into wall receptacle. Do not open the door.	
2. Press and hold PROGRAM pad until the display show "PROG","P"and "L". (for more than 5 seconds)	PROG
3. Program lock feature now activated.	PROG P L

10. To Release Program Lock

OPERATION	DISPLAY
1. Plug the power supply cord into wall receptacle.	
2. Open the door. Leave it open. While pressing STOP/RESET pad, press and hold PROG pad until the display will show "PROG"and "P". (for more than 5 seconds)	0
3. Program lock feature is now deactivated.	PROG P

11. To Select Beep Tone Options

OPERATION	DISPLAY
1. Plug the power supply cord into wall receptacles.	
2. Open the door and leave it open.	0
3. Press PROG pad and then within 1 minute press 0 pad.	PROG 1 3 bE EP
4. Selected the desired sound loudness level by pressing 0 pad. Repeated pressing of 0 pad will lower the loudness and all the way to silent.	PROG 1 2 bE EP
5. Press PROG pad again.	PROG 1 2 bE EP
6. Close the door. 1 minute later display window will go blank.	

To select length of tone at end of heating cycle there are 2 options.
A. 3 beeps (factory setting)
B. 60 seconds of short beeps.
To set for 60 seconds of short beeps.

OPERATION	DISPLAY
1. Complete steps 1-4 above. Do not close the door.	 1
2. Touch **PROG** pad and quickly select the desired tone length by touching 0 pad. "**1**" illuminated 3 beeps. "**2**" illuminated 60 seconds of beeps.	 2
3. Press **PROG** pad again. 3 seconds later, the display will "**0**".	 2
4. Close the door 1 minute later display will go blank.	

3. WIRING REQUIREMENTS AND POWER SOURCE VOLTAGE SELECTION

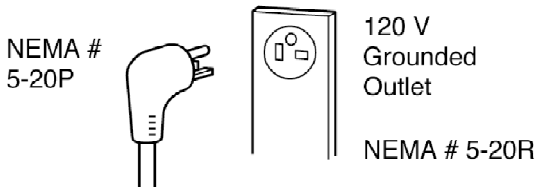
Wiring Requirements

No other appliance should share the circuit with the microwave oven. If it does, the branch circuit fuse may overload and either cause the oven to heat slower than expected or blow the fuse.

1. For Mode NE-1257

The oven must be on a SEPARATE, 20 Amp, 60 Hz-120V GROUNDED CIRCUIT.

NE-1257/ NE-1258

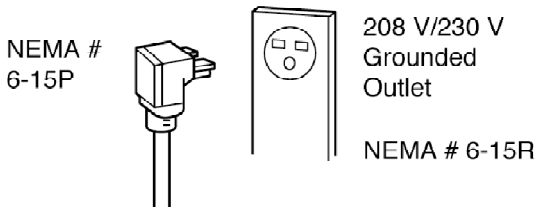


2. For Model NE-1757

A. This oven must be on a separate, 60 Hz GROUNDED CIRCUIT- minimum 15 amps.

B. The microwave ovens are built to operate on 2 different voltages (230 V or 208 V). Be sure that the voltage selector connector (on the back of the oven) is set for your power supply. Connecting oven to 230 volt line with 208 voltage setting is dangerous and may result in overheating of the electrical components thus shortening their life expectancy or possibly causing a fire or other accident. Connecting oven to 230 volt line with 208 voltage will lower the power output of the oven, resulting in slower heating of the food. Panasonic is NOT responsible for damage resulting from the use of the oven with other than specified voltage.

NE-1757

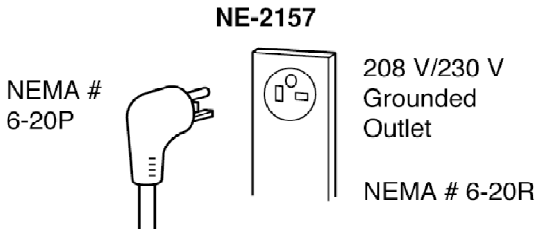


3. For Model NE-2157

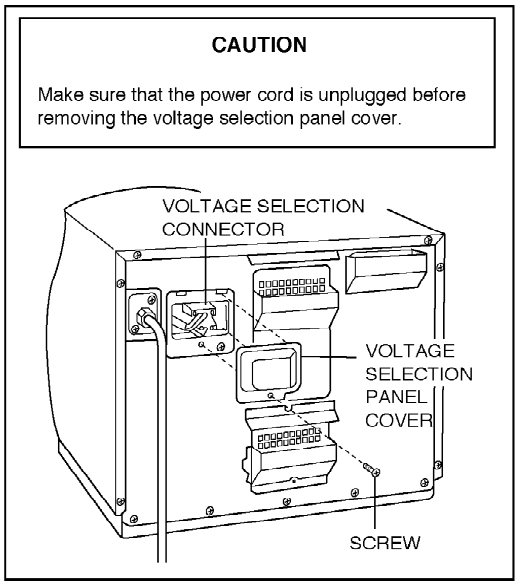
A. This oven must be on a separate, 60 Hz GROUNDED CIRCUIT- minimum 20 amps.

B. The microwave ovens are built to operate on 2 different voltages (230 V or 208 V). Be sure that the voltage selector connector (on the back of the oven) is set for your power supply. Connecting oven to 230 volt line with 208 voltage setting is dangerous and may result in overheating of the electrical components thus shortening their life expectancy or possibly causing a fire or other accident. Connecting oven to 230 volt line with 208 voltage will lower the power output of the oven, resulting in slower heating of the food. Panasonic is NOT

responsible for damage resulting from the use of the oven with other than specified voltage.



Power Source Voltage Selection
The microwave oven Models NE-1757 & NE-2157 are factory set for 208 V operation. For 230 V operation, the following selection MUST be made.
(Step 1) Unscrew the voltage selection panel cover which is located on the back of the oven. Do not remove any other parts from the oven.
(Step 2) Remove the while connector and plug the black connector into the socket.
(Step 3) Store the unused white connector in the rectangular opening.
(Step 4) Reattach the voltage adjustment panel cover to the cabinet.
For 230 V - Use black connector plug.
For 208 V - Use white connector plug.
To go from 230 V to 208 V circuit follow steps 1-4 above, except at step 2, plug the white connector plug into the socket and store the black plug in the rectangular opening.


CAUTION
Make sure that the power cord is unplugged before removing the voltage selection panel cover.
VOLTAGE SELECTION CONNECTOR
VOLTAGE SELECTION PANEL COVER
SCREW

4. SCHEMATIC DIAGRAM

4.1. DIAGRAM 1:NE-1257R, NE-1258R

4.2. DIAGRAM 2:NE-1257CR

4.3. DIAGRAM 3:NE-1757R

4.4. DIAGRAM 4:NE-1757CR

4.5. DIAGRAM 5:NE-2157R

4.6. DIAGRAM 6:NE-2157CR

5. WIRING DIAGRAM

5.1. DIAGRAM 1:NE-1257R, NE-1258R

NOTE: When replacing, check the lead wire color as shown.

5.2. DIAGRAM 2:NE-1257CR

NOTE: When replacing, check the lead wire color as shown.

5.3. DIAGRAM 3:NE-1757R

NOTE: When replacing, check the lead wire color as shown.

5.4. DIAGRAM 4:NE-1757CR

NOTE: When replacing, check the lead wire color as shown.

5.5. DIAGRAM 5:NE-2157R

NOTE: When replacing, check the lead wire color as shown.

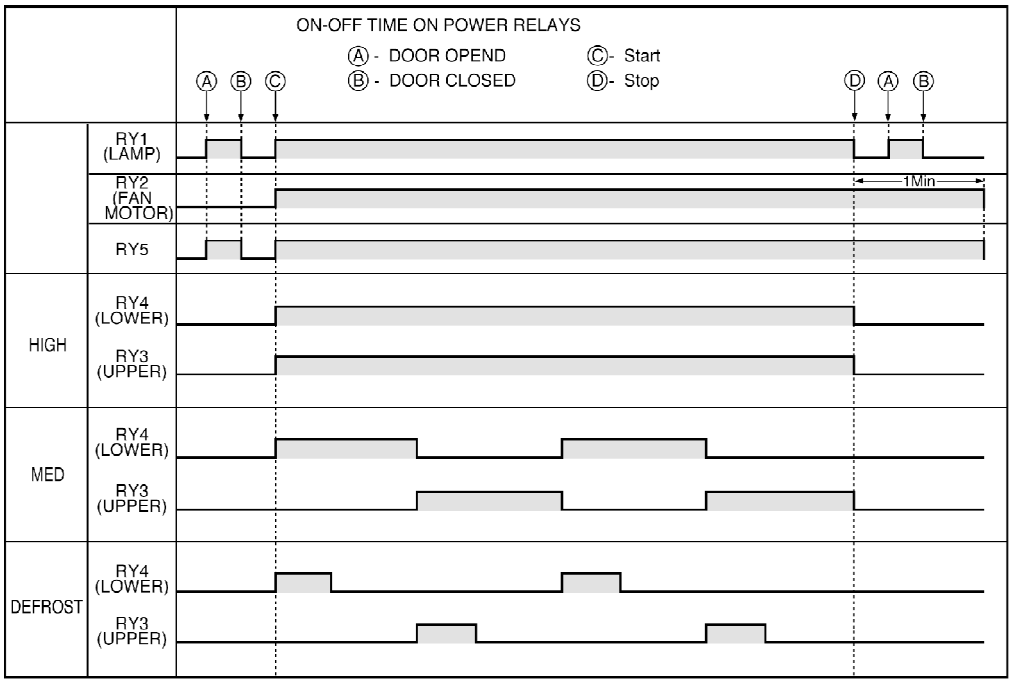
5.6. DIAGRAM 6:NE-2157CR

NOTE: When replacing, check the lead wire color as shown.

6. DESCRIPTION OF OPERATING SEQUENCE

Variable power cooking control

The coil of power relay A and B are energized intermittently by the digital programmer circuit, when the oven is set to MEDIUM or DEFROST power position. The digital programmer circuit controls the ON-OFF time of the power relay A and B contacts in order to vary the output power of the microwave oven. One complete ON and OFF cycle of the power relay is 44 seconds. The relation between indications on the control panel and the output power of the microwave oven is as shown in Figure.



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7. CAUTIONS TO BE OBSERVED WHEN TROUBLESHOOTING

Unlike many other appliances, the microwave oven is high-voltage, high-current equipment. Though it is free from danger in ordinary use, extreme care should be taken during repair.

CAUTION
Servicemen should remove their watches whenever working close to or replacing the magnetron.

7.1. Check the grounding

Do not operate on a 2-wire extension cord. The microwave oven is designed to be used in a completely grounded condition. It is imperative, therefore, to make sure it is properly grounded before beginning repair work.

7.2. If the door lock, the door switch, the door seal or the door develops a malfunction, be sure not to operate the oven until complete repairs are made.

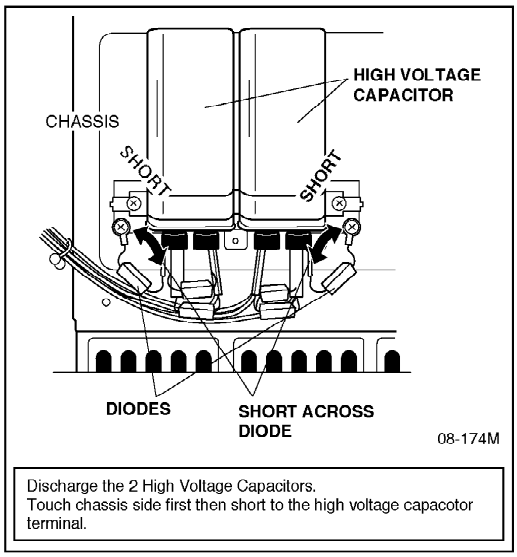
If the oven is operated with any of these parts in imperfect condition, hazardous microwave leakage might occur.

WARNING
There is high-voltage present, with high-current capabilities in the circuits of the high voltage winding and filament winding of the high voltage transformer. It is extremely dangerous to work on or near these circuits with oven energized. DO NOT measure the voltage in the high voltage circuit including filament voltage of magnetron.

7.3. Warning about the electric charge in the high voltage capacitor

For about 30 seconds after the oven is turned off, an electric charge remains in the high voltage capacitor. When replacing or checking parts, remove the power plug from the outlet, wait 30

seconds and short the terminal of the high voltage capacitor (terminal of lead wire from diode) to chassis ground with an insulated jumper lead wire or an insulated handle screwdriver discharge.



Discharge the 2 High Voltage Capacitors.
Touch chassis side first then short to the high voltage capacotor terminal.

Important Note

1. High voltage above 250 volts exist on following parts during operation.
   * Magnetron
   * High Voltage Transformer
   * High Voltage Diode
   * High Voltage Capacitor

   Extra attention and caution should be used during repair or troubleshooting procedures.
2. If the microwave oven is operated with an incorrectly installed door hinge or magnetron, it can cause microwave leakage of over 5mW/cm^2. It is absolutely necessary to check if magnetron and door hinges are correctly and safely installed after repairs or replacement.

WARNING

Never touch any circuitry either your hand insulated tools while oven in energized.

7.4. When parts must be replaced, always remove the power plug from the outlet, and discharge the high voltage capacitor.

WARNING

When the 25/18 Amp. fuse is blown due to the operation of the Interlock Monitor Switch, you must replace the Secondary & Primary Interlock Switches, the Monitor Switch (Short switch), Power Relay and the 25/18 Amp. 250V. fuse.

7.5. Confirm after repair

1. **After repair or replacement of parts, make sure that the screws of the oven, etc. are neither loose nor missing.**
   Microwave might leak if screws are not properly tightened.
2. **Make sure that all electrical connections are tight before inserting**

the plug into the wall outlet.

7.6. Avoid inserting nails, wire, etc. through holes in unit during operation.

Never insert a wire, nail or any other metal object through the lamp holes on the cavity or any other holes or gaps, because such objects may work as an antenna and cause microwave leakage.

CAUTION
MICROWAVE RADIATION
Personnel should not be exposed to the microwave energy which may radiate from the magnetron or other microwave generating device if it is improperly used or connected. All input and output microwave connections, waveguides, flanges, and gaskets must be secure. Never operate the device without a microwave energy absorbing load attached. Never look into an open waveguide or antenna while the device is energized.

CAUTION
High voltage parts may become exposed when outer cabinet is removed.

8. DISASSEMBLY AND PARTS REPLACEMENT PROCEDURE

CAUTION
Servicemen should remove their watches whenever working close to or replacing the magnetron.

8.1. Replacement of magnetrons (Upper and Lower)

Upper magnetron

1. Discharge electric charge remaining on the high voltage capacitors.
2. Remove the entire rear panel by removing screws as shown.
3. Disconnect all lead wires from magnetron and thermal cutout.
4. Remove the 4 screws holding magnetron.
5. Remove 2 screws holding thermal cutout.
6. Remove the mounting bracket from magnetron and install it on the new magnetron.

Lower magnetron

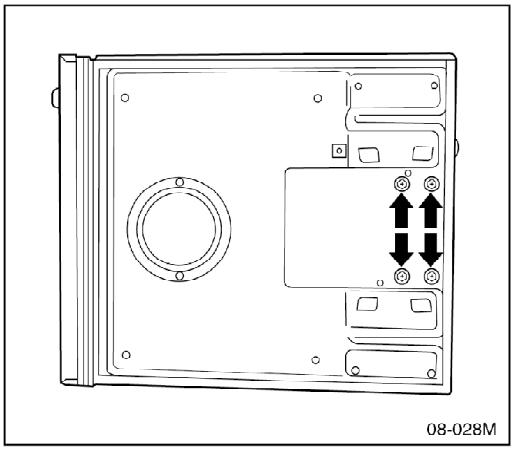
1. Discharge electric charge remaining on the high voltage capacitors.
2. Remove the entire rear panel by removing screws as shown.
3. Carefully place the unit on its left side (H. V. Capacitor side).

4. **Remove the cover by removing 2 screws.**
5. **Remove the 4 screws holding magnetron by inserting screwdriver through the 4 openings on bottom plate.**
6. **Remove 2 screws holding thermal cutout.**
7. **Remove the mounting bracket from magnetron and install it on the new magnetron.**

NOTE: To prevent microwave leakage, tighten mounting screws properly making sure there is no gap between the waveguide and the magnetron.

CAUTION

When connecting 2 filament lead wires to the magnetron terminals, be sure to connect the lead wires in the correct position. The leas wire with blue connector should be connected to “FA trminal” and white or pink one should be connected to “F terminal”.



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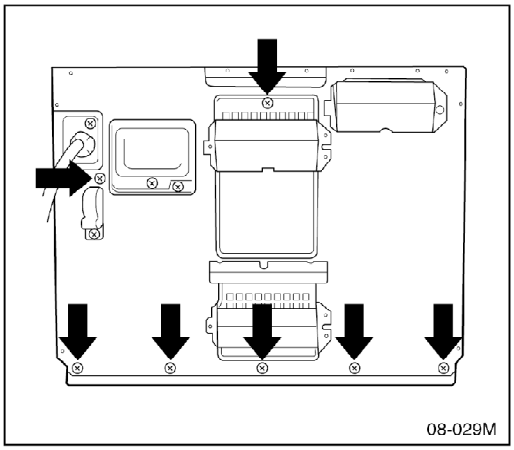

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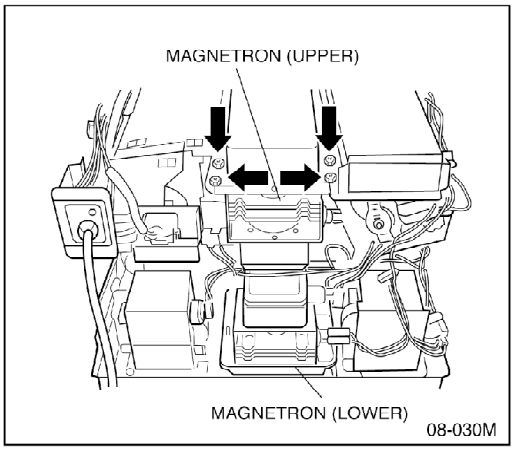
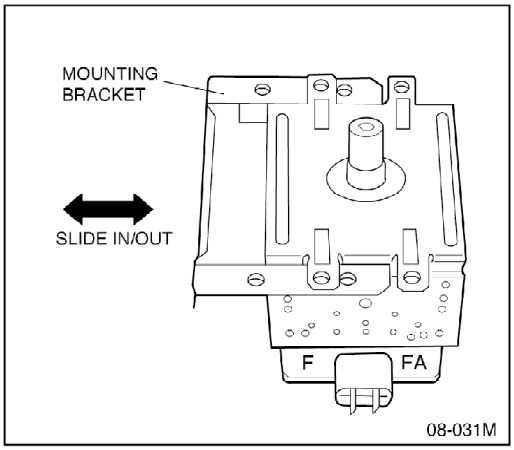




Removal of Positive Lock connector

The positive lock connector is a specially designed loose free connector and you will find this connector in many lead wire connections. To remove this connector, pull the lead wire by pressing an extruded lever in the center of receptacle terminal as shown.

8.2. Replacement of power supply circuit board

NOTE: Be sure to ground any static electric charge built up on your body, before handling the power supply P. C. B. and D. P. C..

1. **Disconnect all lead wires from power supply circuit board.**
2. **Remove the power supply P. C. B. together with its mounting bracket by first removing the 2 bracket holding screws.**
3. **The power supply P. C. B. can be separated from mounting bracket by removing the 2 L. V. T. holding screws and unfastening the plastic clips.**

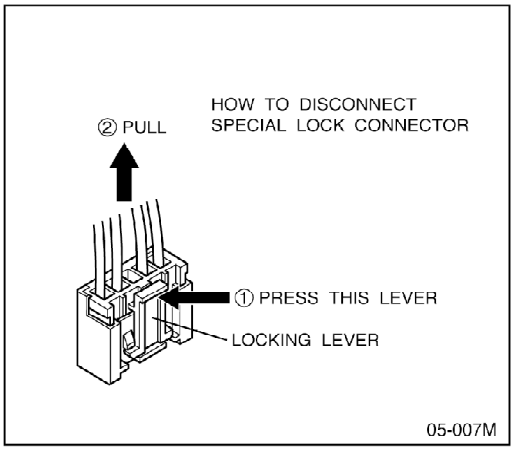
8.3. Replacement of digital programmer circuit board

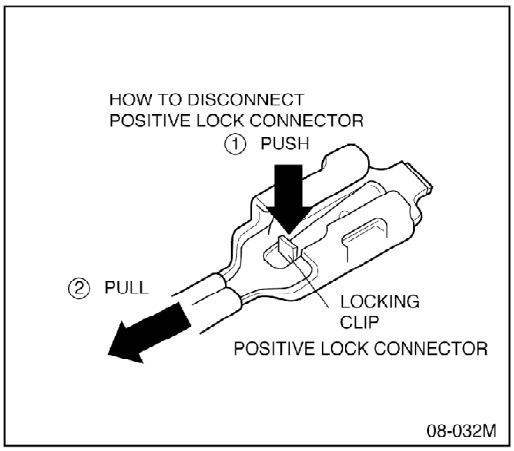
1. **Remove grounding screw for membrane switch and D. P. C. ground.**

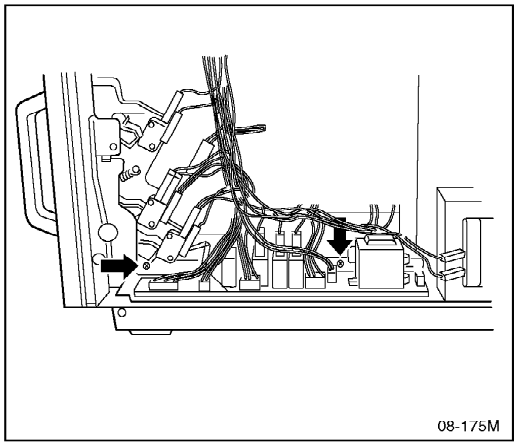
2. Remove 3 screws holding control panel assembly to detach it from main unit then remove connectors.

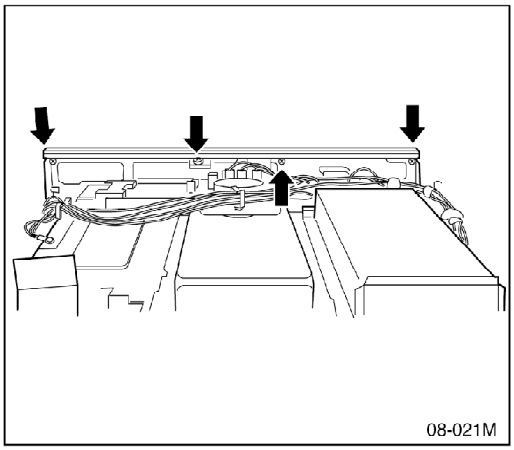
3. Remove 2 screws holding the D. P. C. board and while pushing back on 2 plastic holding clips, remove the board.

NOTE: Please use care in handling the power supply P. C. B. and D. P. C. board to avoid damage.









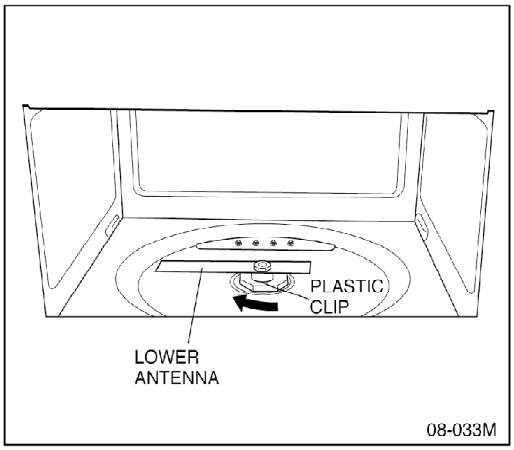
8.4. Replacement of upper antenna

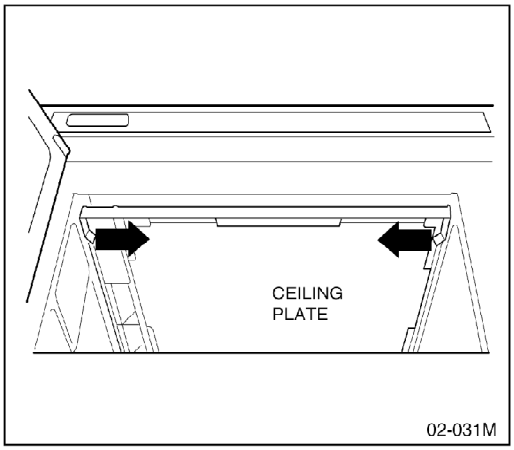
CAUTION
The upper and lower rotating antennas are different type and are not interchangeable each other.
Care should be taken not to reverse the top and bottom antennas.

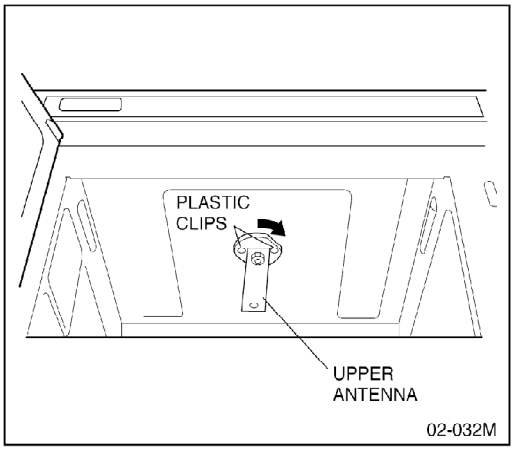
1. **Remove ceiling plate by gently moving the left and right tabs inward while pulling the plate down and outward.**
2. **Using a small flat screwdriver or the like, remove two plastic clips located on the antenna ring. Nest turn the antenna ring approx. 1/8 turn clockwise to unhook the tabs and pull off.**

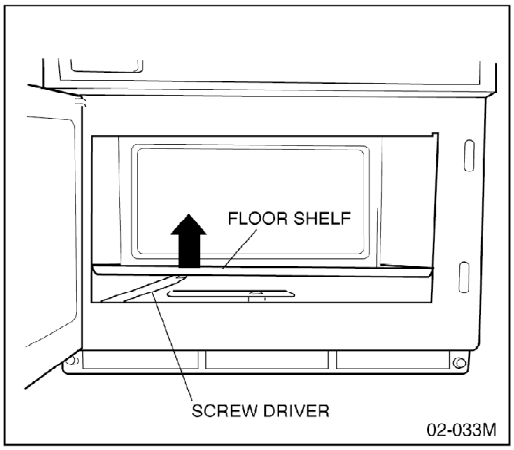
8.5. Replacement of floor shelf and lower antenna

1. **To remove the floor shelf, insert a screwdriver through the small opening on the left side of the oven cavity and carefully lift the floor shelf.**
2. **For removal of lower antenna, use the same procedure as upper antenna.**


PLASTIC
CLIP
LOWER
ANTENNA
08-033M


CEILING
PLATE
02-031M


PLASTIC
CLIPS
UPPER
ANTENNA
02-032M



8.6. Replacement of temperature sensor (Thermal protector)

1. Cut 2 lead wires at the top of sensor terminals.
2. Remove 2 screws holding temp sensor and replace with new one.
3. Solder the lead wires securely to the sensor terminals.

8.7. Disassembly of door assembly

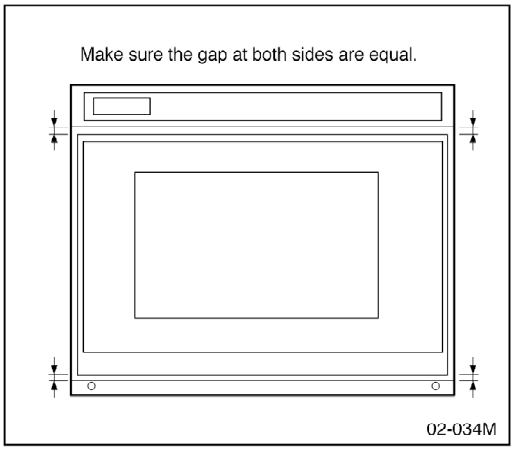
1. Remove each 2 bolts holding upper and lower hinges.
2. Open the door and while pulling the door outward, work upper and lower hinges out through the holes of the front surface of oven.
3. Remove door C (check cover) from door E by carefully pulling outward starting from the upper right hand corner.
4. Remove 2 screws holding door handle and separate door A from door E by carefully freeing catch hooks.
5. Remove door key, door key lever, door key spring and handle pins from door E.
6. Assemble the door by taking the above steps in a reverse order.

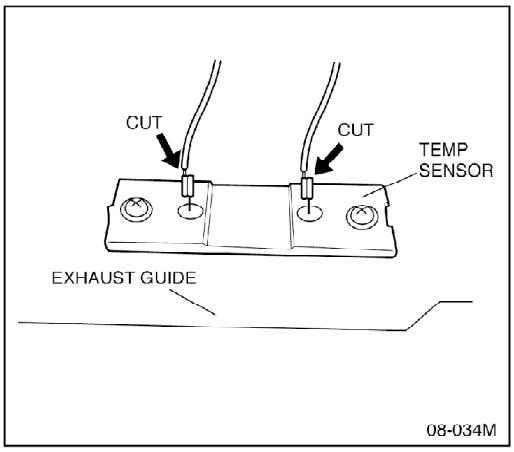
Replacement

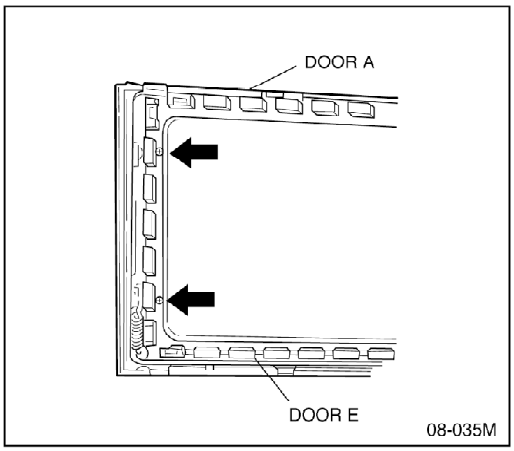
1. When mounting the door to the oven be sure to adjust the door parallel to the bottom line of the oven face plate by moving the upper hinge and lower hinge in the direction necessary for proper alignment.
2. Adjust so that the door has no play between the inner door surface and oven front surface. If the door assembly is not

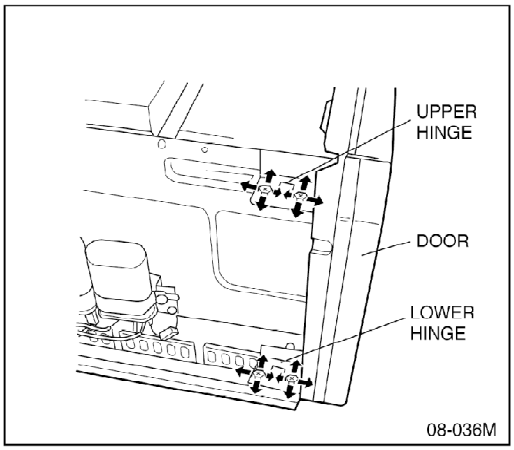
mounted properly, microwave may leak from the clearance between the door and the oven.

NOTE: Please refer to MEASURENMENT AND ADJUSTMENT.









9. COMPONENT TEST PROCEDURE

CAUTION

1. High voltage is present at the high voltage terminal of the high voltage transformer during any cook cycle.
2. It is neither necessary nor advisable to attempt measurement of the high voltage.
3. Before touching any oven components, or wiring, always unplug the oven from its power source and discharge the high voltage capacitor.

9.1. High voltage transformer

1. **Remove connections from the transformer terminals and check continuity.**
2. **Normal (cold) resistance readings should be as follows:**
   Secondary winding Approx. 80 Ω —120 Ω
   Filament winding Approx. 0 Ω
   Primary winding Approx. 0 Ω —3 Ω

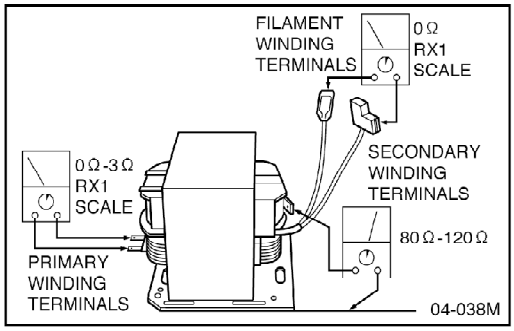
9.2. High voltage capacitor

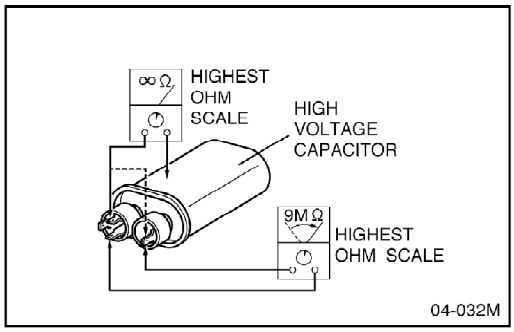
1. **Check continuity of capacitor with meter on highest OHM scale.**
2. **A normal capacitor will show continuity for a short time, and then indicate 9M Ω once the capacitor is charged.**
3. **A shorted capacitor will show continuous continuity.**
4. **An open capacitor will show constant 9M Ω .**
5. **Resistance between each terminal and chassis should be infinite.**

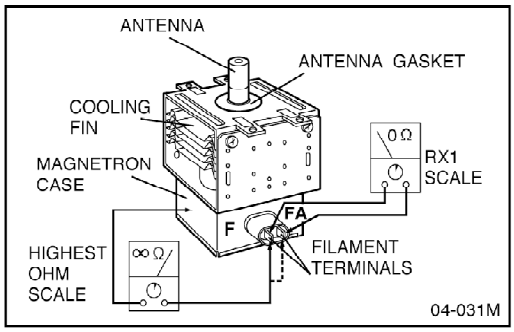
9.3. Magnetron

Continuity checks can only indicate an open filament or a shorted magnetron. To diagnose for an open filament or shorted magnetron.

1. **Isolate magnetron from the circuit by disconnecting the leads.**
2. **A continuity check across magnetron filament terminals should indicate one ohm or less.**
3. **A continuity check between each filament terminal and magnetron case should read open.**







9.4. Diode

1. **Isolate the diode from the circuit by disconnecting the leads.**
2. **With the ohmmeter set on the highest resistance scale, measure the resistance across the diode terminals. Reverse the meter leads and again observe the resistance reading. Meter with 6V, 9V or higher voltage batteries should be used to check the front-to-back resistance of the diode, otherwise an infinite resistance may**

be read in both directions.
A normal diode's resistance will be infinite in one direction and several hundred k Ω in the other direction.

9.5. Membrane key board (Membrane switch assembly)

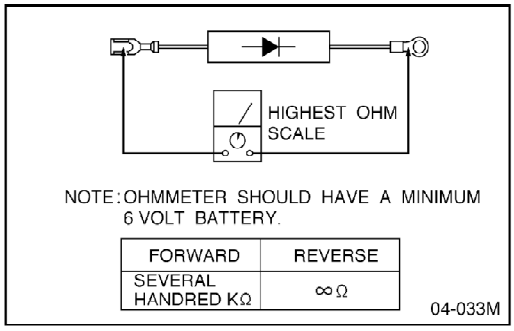
Check continuity between switch terminals, by tapping an appropriate pad on the key board. The contacts assignment of the respective pads on the key board is as shown in digital programmer circuit.

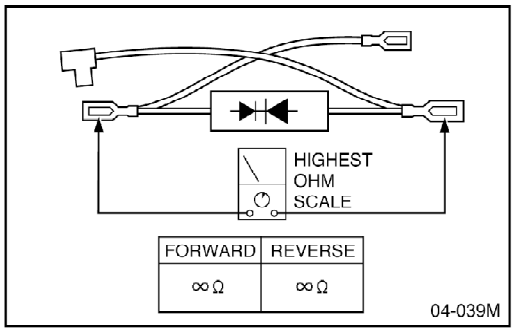
9.6. Protector diode

1. Isolate the protector diode assembly from the circuit by disconnecting its leads.
2. With the ohmmeter set on the highest resistance scale, measure the resistance across the protector diode terminals.
   Reverse the meter leads and again observe the resistance reading. A normal protector diode's resistance will be infinite in both directions. It is faulty if it shows continuity in one or both directions.

9.7. Temp sensor (Thermal protector)

A temp sensor is mounted on exhaust guide. Its purpose is to automatically shut off the oven in case the cavity overheats for any reason.
The thermal protector will operate at 257°F (125°C).
The device is connected to the DPC on touch control models.
When the thermal protector exceeds its temperature it will turn off the power to oven cavity and display will go to reset mode.
The cooking program can be reset after cool-down.
THERMISTOR RESISTANCE VALUE
30K—120K at 10°C—30°C (50°F—86°F)





10. MEASUREMENTS AND ADJUSTMENTS

WARNING

For continued protection against excessive radiation emission, replace only with identical replacement parts. When the 18/25 Amp. fuse is blown due to the operation of the Interlock Monitor Switch, you must replace.

(A) TYPE B-16G-3C26 (ANE61424L0AG) for Secondary Interlock SW. (LATCH SW A) and TYPE V-15G-3C26 (ANE6142-F60) for Primary Interlock SW. (LATCH SW. B)

(B) TYPE V-16G-2C25 (ANE61784L0AG) for Monitor SW. (SHORT SW.).

(C) TYPE G5J-1-TP (AEBG5B18P-1) for Power Relay. (RY3, RY4)

(D) TYPE ABC RATED 250V, 18A fuse, (A62303970AP) for (NE-1757R/CR & NE-2157R/CR) or 25A fuse (ANE6230P90AP) for 1257R/CR and NE-1258R.

10.1. Installation of Safety switch A, Safety switch B and Short switch

1. **When mounting Safety switch A, Safety switch B and short switch to door hook assembly, mount the Safety switch A, Safety switch B and the short switch to the door hook assembly as shown. (in Figure).**
   NOTE: No specific adjustment during installation of Safety switch A, Safety switch B and short switch to the door hook is necessary.
2. **When mounting the door hook assembly to the oven assembly, adjust the door hook assembly by moving it in the direction of arrow in (Figure) so that the oven door will not have any play in it. Check for play in the door by pulling the door assembly. Make sure that the latch keys move smoothly after adjustment it completed. Completely tighten the screws holding the door hook assembly to the oven assembly.**
3. **Reconnect the short switch, safety switches A & B and check the continuity of t monitor circuit and all latch switches again.**

10.2. Measurement of microwave output

The power output of the magnetron can be determined by performing IEC standard test procedures. However, due to the complexity of IEC test procedures, it is recommended to test the magnetron using the simple method outlined below.

Necessary Equipment:

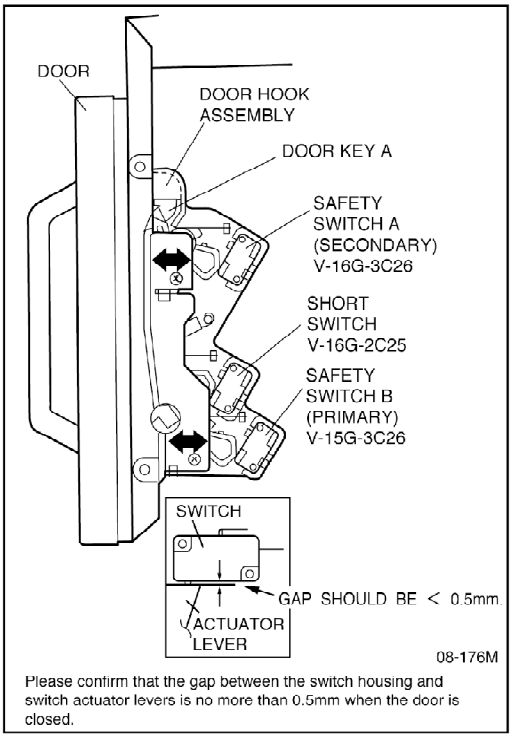
***1 liter beaker**

***Glass thermometer (Celsius scale)**

***Wrist watch or stopwatch**

NOTE: Check the line voltage under load. Low voltage will lower the magnetron output. Take the temperature readings and heating time as accurately as possible.

1. **Fill the beaker with exactly one liter of tap water. Stir the water using the thermometer and record the beaker's temperature (recorded as T1)**
2. **Place the beaker on the center of ceramic shelf.**
3. **Set the one to High power and heat it for exactly one minute.**
4. **Stir the water again and read the temperature of the beaker (recorded as T2). The normal temperature rise (T2-T1) at High power output for each model is as shown in table.**



Please confirm that the gap between the switch housing and switch actuator levers is no more than 0.5mm when the door is closed.

TABLE (1 ℓ -1 min. test)

RATED OUTPUT	TEMPERATURE RISE
1200 W (IEC705)	Min. 10.6°C
1700 W (IEC705)	Min. 15.3°C
2100 W (IEC705)	Min. 18.1°C

11. PROCEDURE FOR MEASURING MICROWAVE ENERGY LEAKAGE

WARNING

Check for radiation leakage after every servicing. should the leakage be more than 2 mW/cm² (1mW/cm² for Canada) inform PHCC, PSC, or PCI immediately. After repairing or replacing any radiation safety device, keep a written record for future reference, as required by D.H.H.S. and Health and Welfare Canada regulation. This requirement must be strictly observed. In addition, the leakage reading must be recorded on the service repair ticket while in the customer's home.

NOTE: The U. S. Government standard is 5 mW/cm2 while in the customer's home. 2 mW/cm2 stated here is our own voluntary standard. (1 mW/cm2 for Canada)

11.1. Equipment

Note before measuring.

1. **Do not exceed meter full scale deflection. Leakage monitor should initially be set to the highest scale.**
2. **To prevent false readings the test probe should be held by the**

grip portion of the handle only and moved along the shaded area shown in Figure no faster than 1 inch/sec (2.5 cm/sec).

3. **Leakage with the outer panel removed — less than 5 mW/cm^2.**
4. **Leakage for a fully assembled oven with door normally closed — less than 2 mW/cm^2 (1 mW/cm^2 for Canada).**
5. **Leakage for a fully assembled oven [Before the latch switch (primary) is interrupted] while pulling the door — less than 2 mW/ cm^2.**

1. **Pour 275± 15cc (9ozs ± 1/2oz) of 20 ± 5°C (68± 9°F) water in a beaker which has graduations to 600cc, and place in the center of the oven.**
2. **Set the radiation monitor to 2450MHz and use it following the manufacture's recommended test procedure to assure correct results.**
3. **When measuring the leakage, always use the 2 inch (5 cm) spacer supplied with the probe.**
4. **Tap the start pad or set the timer and with the magnetron oscillating, measure the leakage by holding the probe perpendicular to the surface being measured.**

1. **Measurement with the outer pane removed.**
   Whenever you replace the magnetron, measure for radiation leakage before the outer panel is installed and after all necessary components are replaced or adjusted. Special care should be taken when measuring around the magnetron.

WARNING
Avoid contacting any high voltage parts.

2. **Measurements with a fully assembled oven.**
   After all components, including outer panel are fully assembled, measure for radiation leakage around the door periphery, the door viewing window, the exhaust opening and air inlet openings.

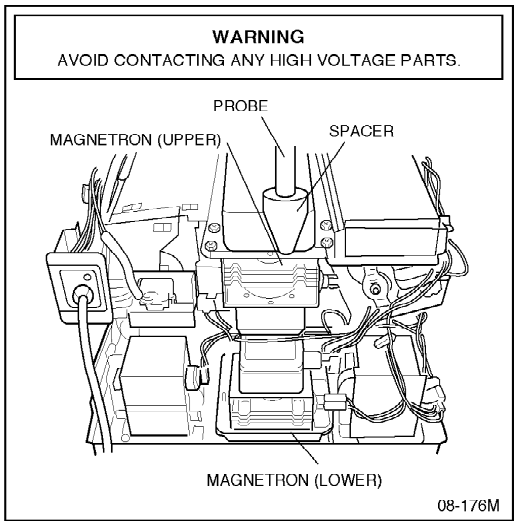
11.2. Record keeping and notification after measurement

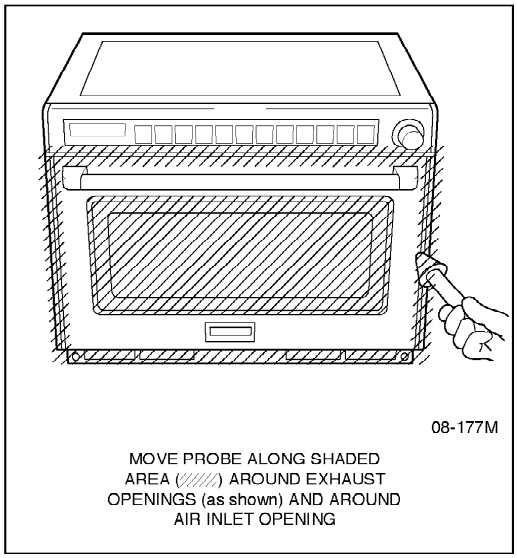
1. **After any adjustment or repair to a microwave oven, a leakage reading must be taken. Record this leakage reading on the repair**

ticket even if it is zero.
A copy of this repair ticket and the microwave leakage reading should be kept by repair facility.

2. Should the radiation leakage be more than 2 mW/cm2 (1 mW/cm2 for Canada) after determining that all parts are in good condition, functioning properly, and genuine replacement parts as listed in this manual have been used, immediately notify PHCC, PSC or PCI.

11.3. At least once a year, have the radiation monitor checked for calibration by its manufacturer.





12. TROUBLESHOOTING GUIDE

CAUTION

1. Check grounding before checking for trouble.
2. Be careful of the high voltage circuit.
3. Discharge high voltage capacitor.
4. When checking the continuity of the switches or the high voltage transformer, disconnect one lead wire from these parts and then check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.
   When disconnecting a plastic connector from a terminal, you must hold the plastic connector instead of the lead wire and then disconnect it, otherwise lead wire may be open or the connector cannot be removed.
5. Be sure to ground any static electric charge built up in your body, before handling the D.P.C.
6. A 120/208/230V AC s present at the shaded area of the power supply circuit board 9Terminals of power relays and primary circuit of low voltage transformer). When troubleshooting, be cautions of possible electrical shock hazard.

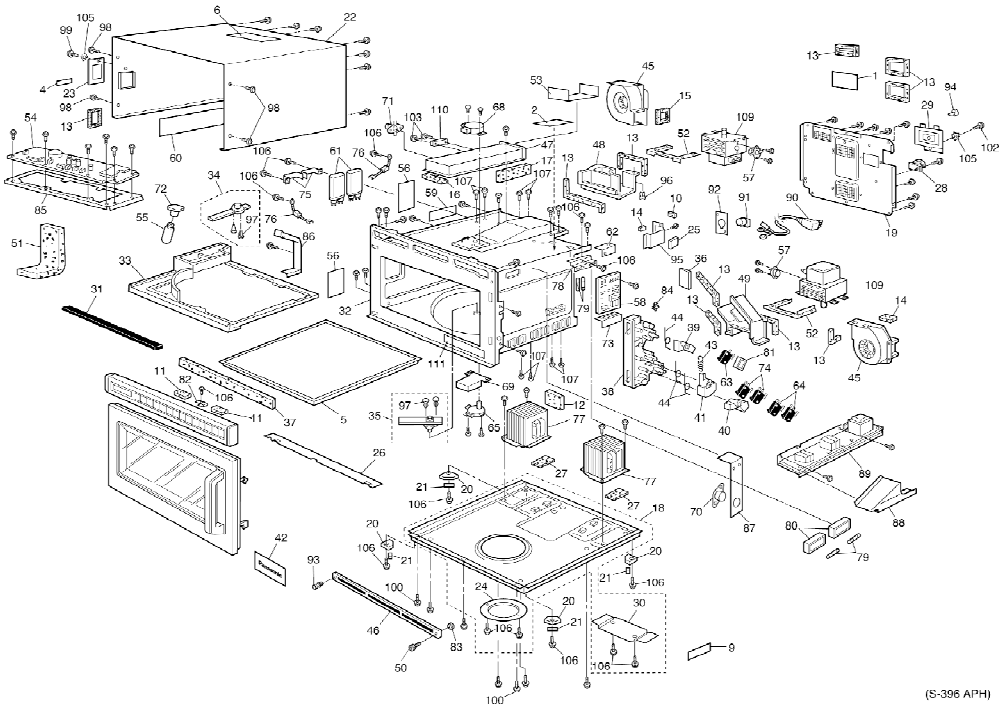
First of all operate the microwave oven following the correct operating procedures described on pages 3 of this service manual in order to find the exact cause of any trouble.

NOTE: If the unit shows faulty symptom as shown below, check the parts listed in possible cause column depending on failure indication e.g. F81, F82 in the display.

[TROUBLE 1] Oven does not operate at all or oven does not start cooking.

DISPLAY	CONDITIONS	POSSIBLE CAUSE	TIMING OF FAILURE INDICATION
F33	Open temperature sensor (exhaust)	1. Temperature sensor failure 2. Digital programmer circuit failure 3. Loose connector CN4	It is appeared when failure occured.
F34	Short temperature sensor (exhaust)	1. Temperature sensor failure 2. Digital programmer circuit failure	It is appeared when failure occured.
F44		1. Shorted power select switch 2. Shorted membrane switch	It is appeared 2 miniued after failure occured.
F01 (Wish continuous beep sounds)	Exhaust temperature exceeds 120°C	1. Burning food in the oven due to over cook	It is appeared when exhaust temperature exceeds above 120°C.
F05	Memory failure	1. Digital programmer circuit failure	
F81	No voltage supply to high voltage transformer (upper)	1. Relay failure RY-3 2. 10A fuse open 3. Digital programmer circuit failure	It is appeared when cooking completed.
F82	No voltage supply to high voltage transformer (lower)	1. Relay failure RY-4 2. 10A fuse open 3. Digital programmer circuit failure	It is appeared when cooking completed.
F86	Shorted contacts of RY-3	1. Relay failure RY-3 2. Digital programmer circuit failure	It is appeared when failure occured.
F87	Shorted contacts of RY-4	1. Relay failure RY-4 2. Digital programmer circuit failure	It is appeared when failure occured.

13. EXPLODED VIEW AND PARTS LIST



14. PARTS LIST

NOTE: When ordering replacement part(s), please use part number(s) shown in this parts list.
Important safety notice:
Components identified ⚠ by mark have special characteristics important for safety.
When replacing any of these components, use only manufacture's specified parts.

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
1	ANE00068U0CP	WARNING LABEL	1	NE-1257CR NE-1757CR NE-2157CR
1	A00064000AP	WARNING LABEL	1	NE-1257R NE-1258R NE-1757R NE-2157R
2	A00333960AP	FUSE LABEL	1	
3	A0056-3500	HIGH VOLTAGE LABEL	1	
4	ANE0072L20CP	CAUTION LABEL	1	NE-1257CR NE-1757CR NE-2157CR
4	ANE0072L20AP	CAUTION LABEL	1	NE-1257R NE-1258R NE-1757R NE-2157R
5	ANE010T8U0AP	SHELF	1	
6	ANE0150110AG	CAUTION LABEL	1	NE-1257R NE-1258R NE-1757R NE-2157R
7	ANE01728U0CP	CAUTION LABEL	1	
8	ANE05108V0CP	CAUTION LABEL	1	NE-1757CR NE-2157CR
8	ANE05108V0AP	CAUTION LABEL	1	NE-1757R NE-2157R
9	A05243960AP	NAME LABEL	1	NE-1257R
9	A05243990AP	NAME LABEL	1	NE-1258R
9	A05243970AP	NAME LABEL	1	NE-1757R
9	A05243980AP	NAME LABEL	1	NE-2157R
9	A05243960CP	NAME LABEL	1	NE-1257CR
9	A05243970CP	NAME LABEL	1	NE-1757CR
9	A05243980CP	NAME LABEL	1	NE-2157CR
10	ANE0901000CD	CUSHION RUBBER A	1	
11	ANE000Z000AD	CUSHION RUBBER A	5	NE-1257R NE-1757R
11	ANE000Z000AD	CUSHION RUBBER A	5	NE-1257R NE-1757R
12	ANE0911000MG	CUSHION RUBBER B	1	
13	ANE000Z000AA	CUSHION RUBBER C	10	

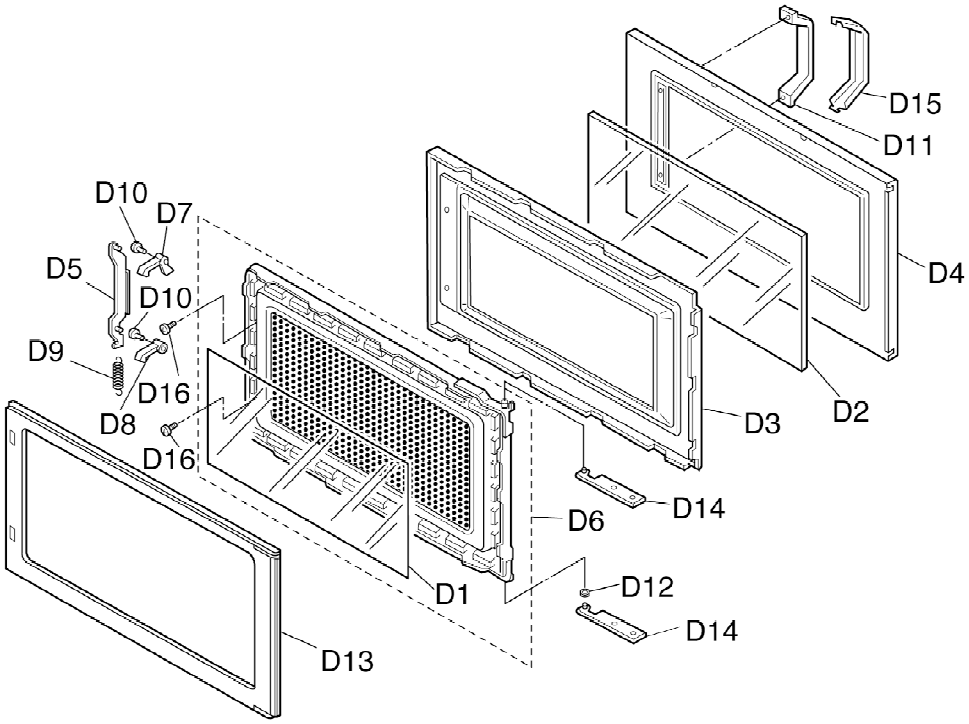
Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
13	ANE000Z000AA	CUSHION RUBBER C	10	
13	ANE000Z000AA	CUSHION RUBBER C	10	
13	ANE000Z000AA	CUSHION RUBBER C	10	
13	ANE000Z000AA	CUSHION RUBBER C	10	
13	ANE000Z000AA	CUSHION RUBBER C	10	
13	ANE000Z000AA	CUSHION RUBBER C	10	
13	ANE000Z000AA	CUSHION RUBBER C	10	
13	ANE000Z000AA	CUSHION RUBBER C	10	
14	ANE000Z000AD	CUSHION RUBBER C	4	NE-1257CR NE-1757CR NE-2157CR
14	ANE000Z000AD	CUSHION RUBBER C	5	NE-1258R NE-2157R
15	ANE000Z000AB	CUSHION RUBBER C	1	
16	ANE0962000AP	CUSHION RUBBER D	1	
17	ANE0962000AV	CUSHION RUBBER D	1	
18	A100A-3280	BASE	1	
19	A100Q-3280	BACK PANEL	1	
20	A1007-3280	FOOT	4	
20	A1007-3280	FOOT	4	
20	A1007-3280	FOOT	4	
20	A1007-3280	FOOT	4	
21	A1008-3280	RUBBER FOOT	4	
21	A1008-3280	RUBBER FOOT	4	
21	A1008-3280	RUBBER FOOT	4	
21	A1008-3280	RUBBER FOOT	4	
22	ANE10098U0AP	CABINET BODY	1	
23	ANE10268U0AP	LAMP COVER	1	
24	ANE10288U0AP	ANTENNA MOTOR COVER	1	
25	ANE10498U0AP	CUSHION RUBBER	1	
26	NE11268U0AP	BASE BRACKET	1	
27	ANE1062-8U0	CUSHION RUBBER B	2	
27	ANE1062-8U0	CUSHION RUBBER B	2	
28	ANE11408A0AG	STOPPER	1	
29	ANE11548U0AP	BACK PANEL COVER	1	
30	ANE11668U0AP	BASE METAL	1	
31	ANE11748U0AP	SPACER	1	
32	A200A-3280	OVEN	1	⚠
33	A2011-3470	CEILING PLATE	1	⚠
34	A202K-3850	ANTENNA	1	(UPPER)
35	A202V3310GP	ANTENNA B	1	(LOWER) NE-1257R NE-1257CR NE-1757R NE-1757CR NE-1258R
35	A202V-3850	ANTENNA B	1	NE-2157R NE-2157CR (LOWER)
36	ANE21208U0AP	SPACER	1	
37	A8251-3180	SPACER	1	
38	A3020-3850	DOOR HOOK A	1	⚠
39	A3136-3470	HOOK SPACER A	1	
40	A3137-3850	HOOK SPACER B	1	
41	A3138-3470	HOOK SPACER C	1	
42	A31863960CP	DOOR PANEL	1	NE-1257CR
42	A31863960AP	DOOR PANEL	1	NE-1257R
42	A31863990AP	DOOR PANEL	1	NE-1258R
42	A31863970CP	DOOR PANEL	1	NE-1757CR
42	A31863970AP	DOOR PANEL	1	NE-1757R
42	A31863980AP	DOOR PANEL	1	NE-2157R
42	A31863980CP	DOOR PANEL	1	NE-2157CR

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
43	ANE32398U0AP	SPRING	1	
44	ANE32628U0AP	SPRING	3	
44	ANE32628U0AP	SPRING	3	
45	A400A3650AP	FAN MOTOR	2	NE-1257CR NE-1257R NE-1258R (50W)
45	A400A3660AP	FAN MOTOR	2	NE-1757CR NE-1757R (54W)
45	A400A3780AP	FAN MOTOR	2	NE-2157R NE-2157CR (51W)
46	A400B-3280	AIR FILTER FLAME	1	
47	A4024-3180	EXHAUST GUIDE A	1	
48	ANE40258U0AP	AIR GUIDE A	1	
49	ANE40268U0AP	AIR GUIDE B	1	
50	A4091-3280	SCREW	1	FOR AIR FILTER FLAME
51	ANE41038U0AP	AIR GUIDE CUSHION B	1	
52	ANE50328U0AP	MAGNETRON BRACKET	2	
52	ANE50328U0AP	MAGNETRON BRACKET	2	
53	A50493650CP	FIRE BARRIER	1	NE-1257CR NE-1757CR
53	A50493780CP	FIRE BARRIER	1	NE-2157CR
54	A603L3960AP	D.P.CIRCUIT (U)	1	NE-1257CR NE-1257R NE-1258R RTL (W/COMPONENT)
54	A603L3970AP	D.P.CIRCUIT (U)	1	NE-1757CR NE-1757R RTL (W/COMPONENT)
54	A603L3980AP	D.P.CIRCUIT (U)	1	NE-2157R NE-2157CR RTL (W/COMPONENT)
55	ANE6030540AP	INCANDESCENT LAMP	1	NE-1257CR NE-1257R NE-1258R (125V 20W)
55	A60304080BP	INCANDESCENT LAMP	1	NE-1757CR NE-1757R NE-2157R NE-2157CR (240V 20W)
56	ANE60408U0AP	OVEN LAMP SHEET	2	NE-1257CR NE-1257R NE-1258R NE-1757CR NE-1757R
56	A60403780AP	OVEN LAMP SHEET	2	NE-2157R NE-2157CR
57	ANE61458U0AP	THERMAL CUTOUT	2	⚠
57	ANE61458U0AP	THERMAL CUTOUT	2	⚠
57	ANE61458U0AP	THERMAL CUTOUT	2	⚠
58	A605S3650CP	PC BOARD H (U)	1	NE-1257CR
58	A605S3660CP	PC BOARD H (U)	1	NE-1757CR NE-2157CR
59	ANE60708U0BP	INSULATION SHEET A	1	
60	A60713310BP	INSULATION SHEET B	1	
61	A60903650AP	H.V.CAPACITOR	2	⚠NE-1257CR NE-1257R NE-1258R
61	A60903660AP	H.V.CAPACITOR	2	⚠NE-1757CR NE-1757R
61	A60903780AP	H.V.CAPACITOR	2	⚠NE-2157R NE-2157CR
62	A6070-3280	INSULATION SHEET A	2	
63	ANE6142-F60	MICROSWITCH	2	⚠(V-15G-3C26)PRIMARY LATCH SWITCH
64	ANE61424L0AG	MICROSWITCH	1	⚠(V-16G-3C26)SECONDARY LATCH SWITCH
65	A6144-3280	ANTENNA MOTOR	1	NE-1257CR NE-1257R NE-1258R NE-1757CR NE-1757R (2.5W)
65	A61443030GP	ANTENNA MOTOR	1	NE-2157R NE-2157CR (2.5W)
68	A61443660AP	ANTENNA MOTOR	1	NE-1757CR NE-1757R NE-2157R NE-2157CR (2.5W)
68	A61446030AP	ANTENNA MOTOR	1	NE-1257CR NE-1257R NE-1258R (2.5W)
69	A65943030GP	MOTOR COVER	1	
70	ANE61458U0AP	THERMAL CUTOUT	1	⚠NE-1257R NE-1757R
71	ANE61454L0AG	THERMAL CUTOUT	1	⚠NE-1257CR NE-1757CR
71	A61454050AP	THERMAL CUTOUT	1	⚠NE-2157R NE-2157CR
72	A61524210AA	SOCKET	1	⚠
73	A6170-3280	INSULATION SHEET C	1	NE-1257CR NE-1757CR NE-2157CR
74	ANE61784L0AG	MICRO SWITCH	2	⚠(V-16G-2C25) SHORT SWITCH
75	ANE61888U0AP	CAPACITOR BRACKET	2	
76	A62023960AP	DIODE SI	2	⚠NE-1257CR NE-1257R NE-1258R NE-1757CR NE-1757R
76	A62023880AP	DIODE SI	2	⚠NE-2157R NE-2157CR
77	A621B3650AP	H.V.TRANSFORMER	2	NE-1257CR NE-1257R NE-1258R

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
77	A621B3660AP	H V.TRANSFORMER	2	NE-1757CR NE-1757R
77	A621B3780AP	H.V.TRANSFORMER	2	NE-2157R NE-2157CR
78	ANE62298U0AP	MOUNTING BRACKET	1	
79	ANE6230P90AP	FUSE	1	⚠NE-1257CR NE-1257R NE-1258R (25A)
79	A62303970AP	FUSE	2	⚠NE-1757CR NE-1757R NE-2157R NE-2157CR (18A)
80	A62314000AP	FUSE HOLDER	1	NE-1257R NE-1258R
80	A62314000AP	FUSE HOLDER	2	NE-1757R NE-2157R
81	ANE6238X20AP	SPACER	1	
82	ANE64086Q0AP	WASHER	1	
83	A6408-3280	WASHER	1	
84	ANE65448U0AP	SPACER A	1	
85	A6585-3280	P.C.B.HOLDER	1	
86	ANE66038U0AP	OVEN LAMP BRACKET	1	
87	ANE66268U0AP	THERMAL CUTOUT MOUNT	1	NE-1257R NE-1258R NE-1757R
88	A6688-3180	P.C.B.COVER	1	
89	A692M3650AP	L.V.TRANSFORMER (U)	1	NE-1257CR NE-1257R NE-1258R
89	A692M3660AP	L.V.TRANSFORMER (U)	1	NE-1757CR NE-1757R NE-2157R NE-2157CR
90	B900C3650CP	AC CORD W/PLUG	1	⚠NE-1257CR
90	B900C3650AP	AC CORD W/PLUG	1	⚠NE-1257R NE-1258R
90	B900C3660CP	AC CORD W/PLUG	1	⚠NE-1757CR
90	B900C3660AP	AC CORD W/PLUG	1	⚠NE-1757R
90	B900C3780AP	ACCORD W/PLUG	1	⚠NE-2157R
90	B900C3780CP	AC CORD W/PLUG	1	⚠NE-2157CR
91	ANE9027510RN	CORD BUSHING	1	
92	ANE9035P90AP	CORD BRACKET	1	
93	ANE90828U0AP	CLIP(BLACK)	1	
94	ANE91438U0AP	CLIP(GLAY)	1	NE-1257CR NE-1257R NE-1258R
95	ANE91448U0AP	BRACKET	1	
96	ANE91628U0AP	CLIP B	1	
97	ANE91658V0AP	CLIP	4	
97	ANE91658V0AP	CLIP	4	
98	XTC4+10BC	SCREW	4	(4X10) FOR CABINET BODY
98	XTC4+10BC	SCREW	4	(4X10) FOR CABINET BODY
98	XTC4+10BC	SCREW	4	(4X10) FOR CABINET BODY
99	XTC4+10FC	SCREW	1	(4X10) FORLAMP COVER
100	XTC4+12BK	SCREW (BLACK)	2	(4X12)FOR BASE
100	XTC4+12BK	SCREW (BLACK)	2	(4X12)FOR BASE
101	XTEANE5+10B	SCREW	4	(5X10)FOR H.V.TRANSFORMER
102	XTT4+8E	SCREW	1	(4X8) FOR BACK PANEL COVER
103	XTWANE3+8EX	SCREW	2	(3X8) FOR TEMP SENSOR
104	XTW3+8B	SCREW	4	(3X8) FOR FOOT
105	XWC4BPN	WASHER	2	FOR BACK PANEL COVER, LAMP COVER
105	XWC4BPN	WASHER	2	FOR BACK PANEL COVER, LAMP COVER
106	XYD4+EE12F	SCREW	11	(4X12)FOR DIODE, CAPACITOR BRACKET, AC CORD, MOTOR COVER, BASE METAL ETC
106	XYD4+EE12F	SCREW	11	(4X12)FOR DIODE, CAPACITOR BRACKET, AC CORD, MOTOR COVER, BASE METAL ETC
106	XYD4+EE12F	SCREW	11	(4X12)FOR DIODE, CAPACITOR BRACKET, AC CORD, MOTOR COVER, BASE METAL ETC
106	XYD4+EE12F	SCREW	11	(4X12)FOR DIODE, CAPACITOR BRACKET, AC CORD, MOTOR COVER, BASE METAL ETC
106	XYD4+EE12F	SCREW	11	(4X12)FOR DIODE, CAPACITOR BRACKET, AC CORD, MOTOR COVER, BASE METAL ETC

				COVER, BASE METAL ETC
Ref. No.	**Part No.**	**Part Name & Description**	**Pcs/ Set**	**Remarks**
106	XYD4+EE12F	SCREW	11	(4X12)FOR DIODE, CAPACITOR BRACKET, AC CORD, MOTOR COVER, BASE METAL ETC
106	XYD4+EE12F	SCREW	11	(4X12)FOR DIODE, CAPACITOR BRACKET, AC CORD, MOTOR COVER, BASE METAL ETC
106	XYD4+EE12F	SCREW	11	(4X12)FOR DIODE, CAPACITOR BRACKET, AC CORD, MOTOR COVER, BASE METAL ETC
106	XYD4+EE12F	SCREW	11	(4X12)FOR DIODE, CAPACITOR BRACKET, AC CORD, MOTOR COVER, BASE METAL ETC
106	XYD4+EE12F	SCREW	11	(4X12)FOR DIODE, CAPACITOR BRACKET, AC CORD, MOTOR COVER, BASE METAL ETC
106	XYD4+EE12F	SCREW	11	(4X12)FOR DIODE, CAPACITOR BRACKET, AC CORD, MOTOR COVER, BASE METAL ETC
106	XYD4+EE12F	SCREW	11	(4X12)FOR DIODE, CAPACITOR BRACKET, AC CORD, MOTOR COVER, BASE METAL ETC
107	XYEANE5+ C16T	SCREW	8	(5X16) FOR MAGNETRON
107	XYEANE5+ C16T	SCREW	8	(5X16) FOR MAGNETRON
107	XYEANE5+ C16T	SCREW	8	(5X16) FOR MAGNETRON
107	XYEANE5+ C16T	SCREW	8	(5X16) FOR MAGNETRON
108	XYEA4+C16TS	SCREW	2	
109	2M210-M1F1	MAGNETRON	2	⚠NE-1257R NE-1258R NE-1757R
109	2M210-M1G	MAGNETRON	2	⚠NE-1257CR NE-1757CR
109	2M244-M1F1	MAGNETRON	2	⚠NE-2157R NE-2157CR
109	2M244-M1G	MAGNETRON	2	⚠NE-2157R
110	A601L5150AP	TEMP SENSOR	1	⚠
111	ANE0245X00AP	DHHS LABEL	1	NE-1257R NE-1258R NE-1757R NE-2157R
111	A04115020CQ	CSA LABEL	1	NE-1257CR NE-1757CR NE-2157CR

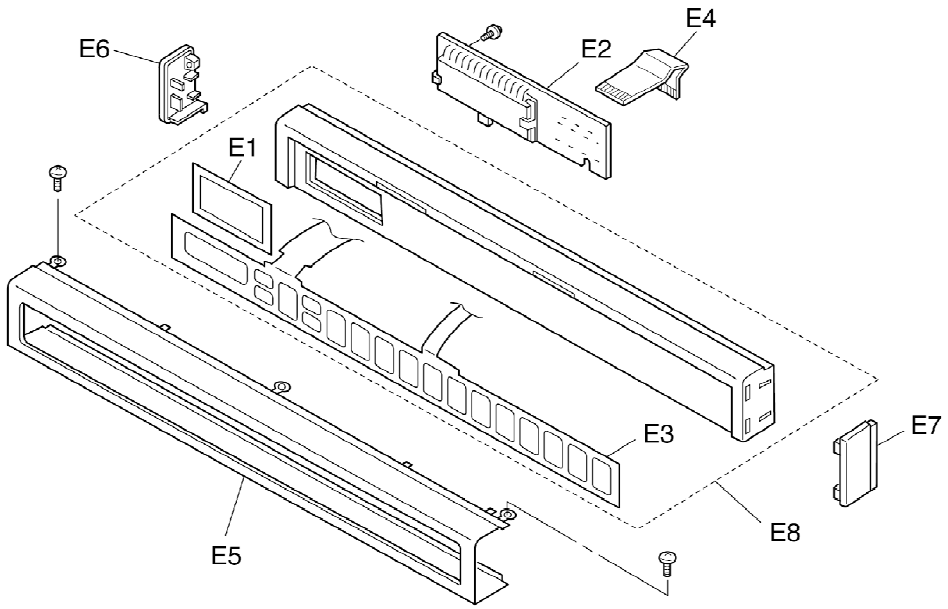
15. DOOR ASSEMBLY



(S-396 APH)

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
D1	A3145-3500	DOOR SCREEN A	1	⚠
D2	ANE31468U0AP	DOOR SCREEN B	1	
D3	ANE30038U0AP	DOOR FRAME(U)	1	
D4	ANE301A8U0AP	DOOR A	1	⚠
D5	A301H-3850	DOOR KEY LEVER B	1	
D6	ANE301Q8U0AP	DOOR E(U)	1	⚠
D7	A3018-3850	DOOR KEY A	1	
D8	A3019-3850	DOOR KEY B	1	
D9	ANE30218U0AP	DOOR KEY SPRING	1	
D10	ANE30562Q0AP	HANDLE PIN	2	
D10	ANE30562Q0AP	HANDLE PIN	2	
D11	A30703170GP	HANDLE PEICE A	1	
D12	ANE3081P60AP	DOOR HINGE SPACER	1	
D13	ANE30858U0AP	DOOR C	1	⚠
D14	ANE30078U0AP	HINGE	2	⚠
D14	ANE30078U0AP	HINGE	2	⚠
D15	ANE31348U0AP	HANDLE PEICE B	1	
D16	XYEA4+C16TS	SCREW	2	(4X16)
D16	XYEA4+C16TS	SCREW	2	(4X16)

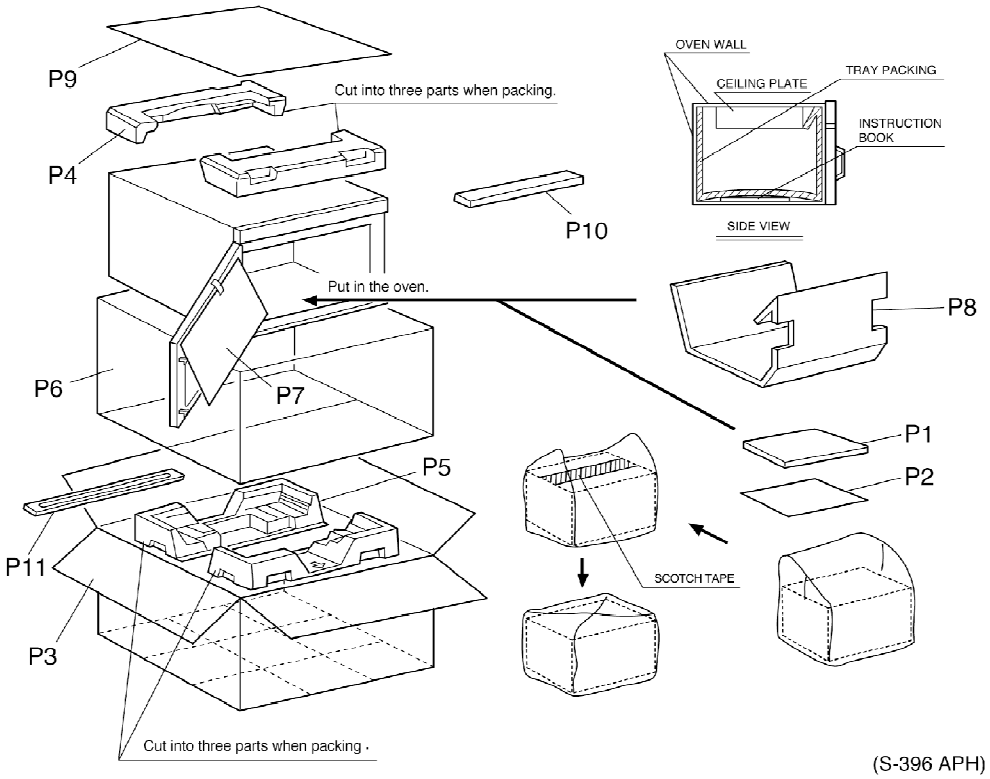
16. ESCUTCHEON BASE ASSEMBLY



(S-396 APH)

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
E1	A8337-3280	ESCUTCHEON SHEET	1	
E2	A603M3310GP	PC BOARD B (U)	1	
E3	A64793310QP	MEMBRANE SWITCH	1	
E4	A6590-3280	FLAT CABLE	1	
E5	ANE80018U0AP	ESCUTCHEON A	1	
E6	ANE80028U0AP	ESCUTCHEON B	1	
E7	ANE80068U0AP	ESCUTCHEON D	1	
E8	A800L3310QP	ESCUTCHEON BASE	1	

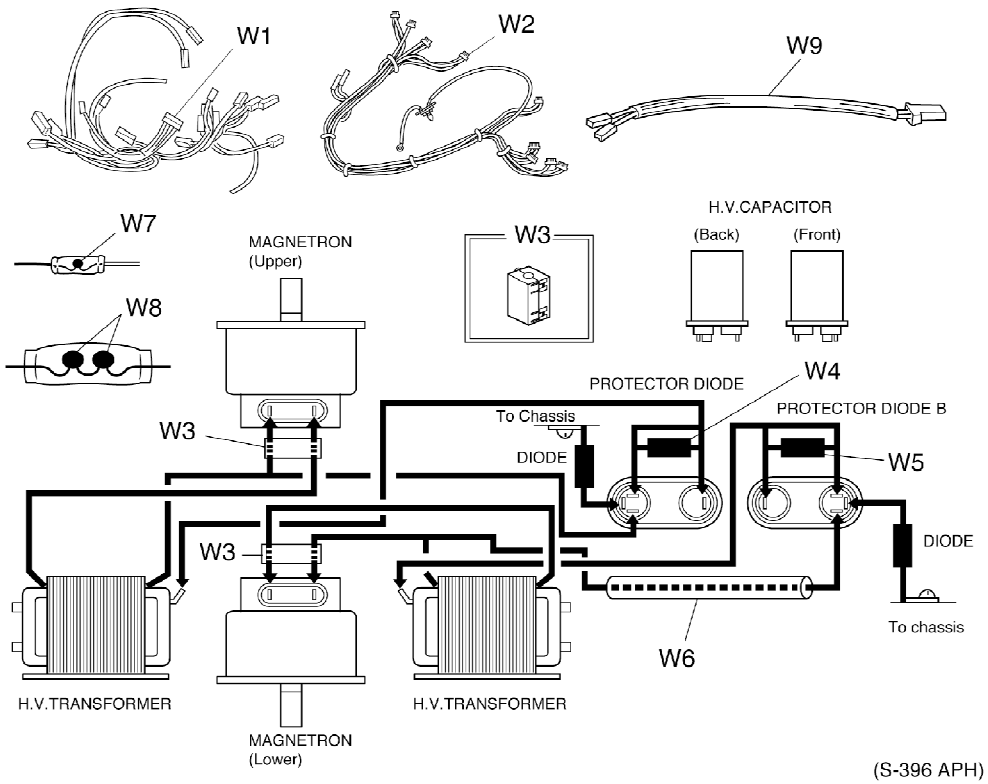
17. PACKING AND ACCESSORIES



(S-396 APH)

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
P1	A00033960CP	INSTRUCTION BOOK	1	NE-1257CR NE-1757CR NE-2157CR
P1	A00033960AP	INSTRUCTION BOOK	1	NE-1257R NE-1258R NE-1757R NE-2157R
P2	A04203960AP	OPERATING GUIDE	1	
P3	A01023960CP	PACKING CASE PAPER	1	NE-1257CR
P3	A01023960AP	PACKING CASE PAPER	1	NE-1257R
P3	A01023990AP	PACKING CASE PAPER	1	NE-1258R
P3	A01023970CP	PACKING CASE PAPER	1	NE-1757CR
P3	A01023970AP	PACKING CASE PAPER	1	NE-1757R
P3	A01023980AP	PACKING CASE PAPER	1	NE-2157R
P3	A01023980CP	PACKING CASE PAPER	1	NE-2157CR
P4	ANE01048U0AP	UPPER FILLER	1	
P5	ANE01058U0AP	LOWER FILLER	1	
P6	A01065200AP	VINYL COVER	1	
P7	ANE01072Q0AP	DOOR SHEET	1	
P8	A01083310GP	TRAY PACKING	1	
P9	ANE01268U0AP	REIN FORCE MATERIAL	1	
P10	A01453230BP	DOOR SHEET B	1	
P11	A1134-3280	FOOT BRACKET	1	

18. WIRING MATERIAL



(S-396 APH)

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
W1	A030A3960CP	LEAD WIRE HARNESS	1	NE-1257CR
W1	A030A3960AP	LEAD WIRE HARNESS	1	NE-1257R NE-1258R
W1	A030A3970CP	LEAD WIRE HARNESS	1	NE-1757CR
W1	A030A3970AP	LEAD WIRE HARNESS	1	NE-1757R
W1	A030A3980AP	LEAD WIRE HARNESS	1	NE-2157R NE-2157CR
W1	A030A3980CP	LEAD WIRE HARNESS	1	NE-2157CR
W2	A030H3960AP	LEAD WIRE HARNESS	1	
W3	A50966520UP	FERRITE CORE	2	NE-1257CR NE-1757CR NE-2157CR
W3	A50966520UP	FERRITE CORE	2	NE-1257CR NE-1757CR NE-2157CR
W3	A50966520UP	FERRITE CORE	2	NE-1257CR NE-1757CR NE-2157CR
W4	A606V3960AP	PROTECTOR DIODE	1	
W5	A606W3960AP	PROTECTOR DIODE B	1	
W6	A61393230BP	INSULATION TUBE	1	
W7	ERZC10DK471U	VARISTOR	1	
W8	ERZV10D112	VARISTOR	2	
W9	ANE0352-3280	LEAD WIRE	1	FOR ANTENNA MOTOR

19. REF. NO. 89 L. V. TRANSFORMER (U)

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
	ANE61158U0AP	POWER RELAYBRACKET	1	
	ANE65448U0AP	SPACER A	6	
	ANE65458U0AP	SPACER B	2	
	A6338-3280	INSULATION SHEET B	1	
	XYN3+F25S	SCREW	2	3X25
CN100	AEEMMF01F05W	CONNECTOR	1	5PIN
CN101	AEEMMF03F06W	CONNECTOR	1	6PIN
CN102	AEEMMD04907W	CONNECTOR	1	7PIN
CN103	AEEMMD04907R	CONNECTOR	1	7PIN RED
CN104	AEEMMF00703W	CONNECTOR	1	3PIN
CN105	AEEMMF00703R	CONNECTOR	1	3PIN RED
CN106	AEEMMD24910W	CONNECTOR	1	10PIN
D100 101 102 103 104 105	MA196-(TA5)	DIODE SI	6	NE-1257CR NE-1257R NE-1258R
D100 101 102 103 104 105 108	MA196-(TA5)	DIODE SI	7	NE-1757CR NE-1757R NE-2157R NE-1257CR
D106 107	AEDNERA1506	DIODE SI	2	
IC100 101	AEICP25011HL	IC	2	
R100 101 102 103	ERDS1TJ434T	CARBON FILM RESISTOR	4	430K 1/2W 5%
RY1	AEBG5B18P-1	POWER RELAY	1	⚠G5B-1-ER18
RY2	AEBG5B1E18	POWER RELAY	1	⚠G5B-1-E 18VDC
RY3 4 5	AEG5J1EM18B	POWER RELAY	5	⚠NE-1757CR NE-1757R NE-2157R NE-2157CR (G5J-1-TP-M-ER18)
RY3 4 6 7	AEG5J1EM18B	POWER RELAY	4	⚠NE-1257CR NE-1257R NE-1258R (G5J-1-TP-M-ER18)
T100	ETP43KZN41EN	L.V.TRANSFORMER	1	NE-1257CR NE-1257R NE-1258R
T100	ETP43KZN61DN	L.V.TRANSFORMER	1	NE-1757CR NE-1757R NE-2157R NE-2157CR
ZD101 102	AEDZ13ES2T1	DIODE SI	2	

20. REF. NO. 58 NOISE FILTER (U)

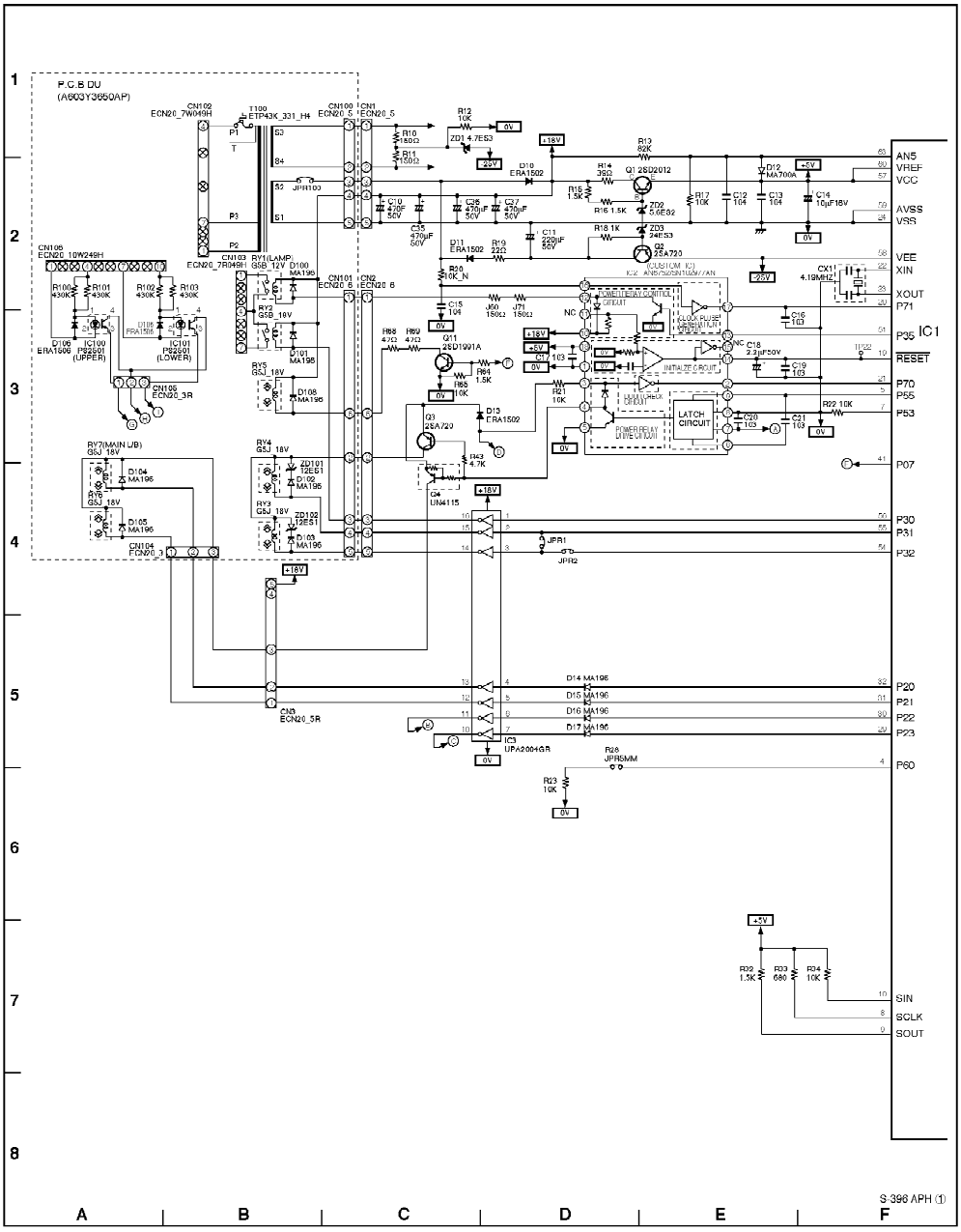
Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
C504 505	ECKMNA222ME	CERAMIC CAPACITOR	2	⚠NE-1257CR NE-1757CR NE-2157CR (0.0022MF 250V)
C506	ECQU2A224MNA	POLYESTER CAPACITOR	1	NE-1257CR NE-1757CR 0.22MF 250V
D502	ERZV10D911E1	VARISTOR	1	NE-1257CR NE-1757CR
D503	ERZV10D182E2	VARISTOR	1	NE-1257CR NE-1757CR
D504	ERZV10D621CS	VARISTOR	1	NE-1257CR NE-1757CR
F500 501	A6116-3280	TERMINAL BOARD	1	NE-1257CR NE-1757CR
F500 501	A62316010BP	FUSE HOLDER	4	NE-1757CR
F501	A62316010BP	FUSE HOLDER	4	NE-1257CR
L500	A621A-1810	FILTER COIL	1	NE-1257CR NE-1757CR NE-1257CR

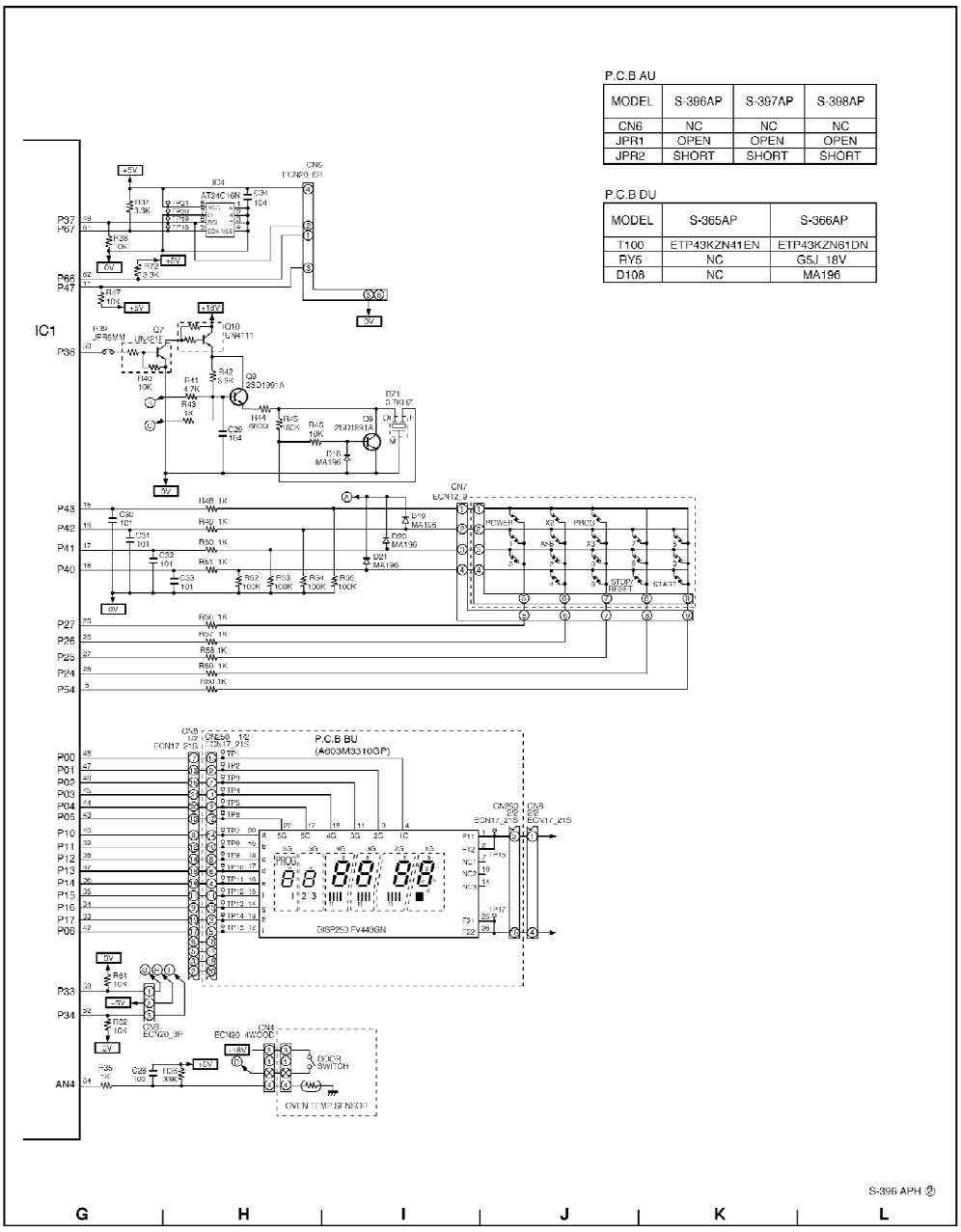
21. REF. NO. E2 P. C. BOARD (U)

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
CN250	AEEMHLIM21S	CONNECTOR	1	21PIN
DISP250	A64563080AP	FLOURESCENT TUBE	1	FV443
	ANE82848U2AP	SPACER	1	

22. DIGITAL PROGRAMMER CIRCUIT

SCHEMATIC DIAGRAM


P.C.B DU
(A603Y3650AP)
AN5
VREF
VCC
AVSS
VSS
VEE
XIN
XOUT
P71
P35 IC1
RESET
P70
P55
P53
P07
P30
P31
P32
P20
P21
P22
P23
P60
SIN
SCLK
SOUT
S-396 APH (1)
A
B
C
D
E
F

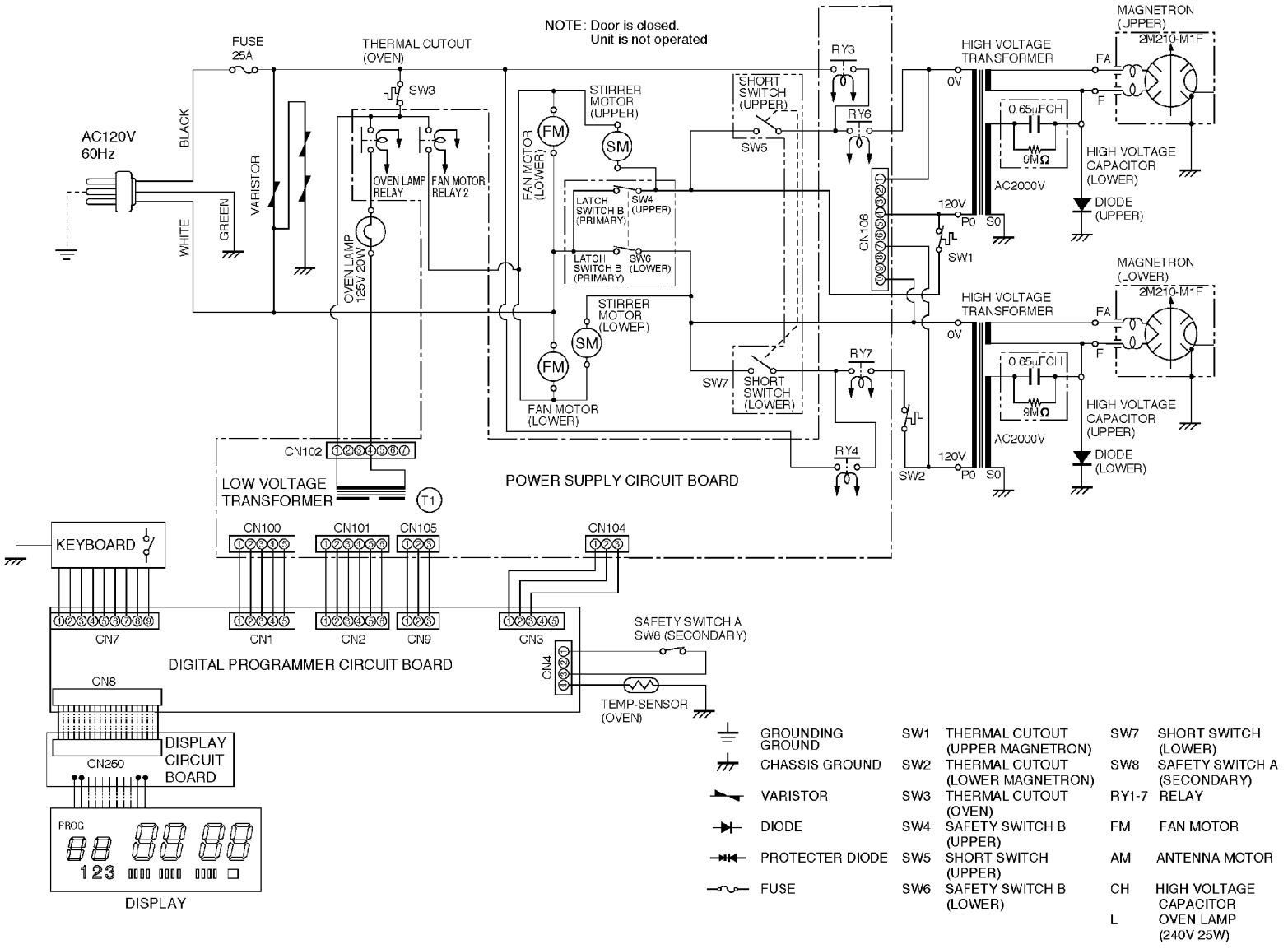


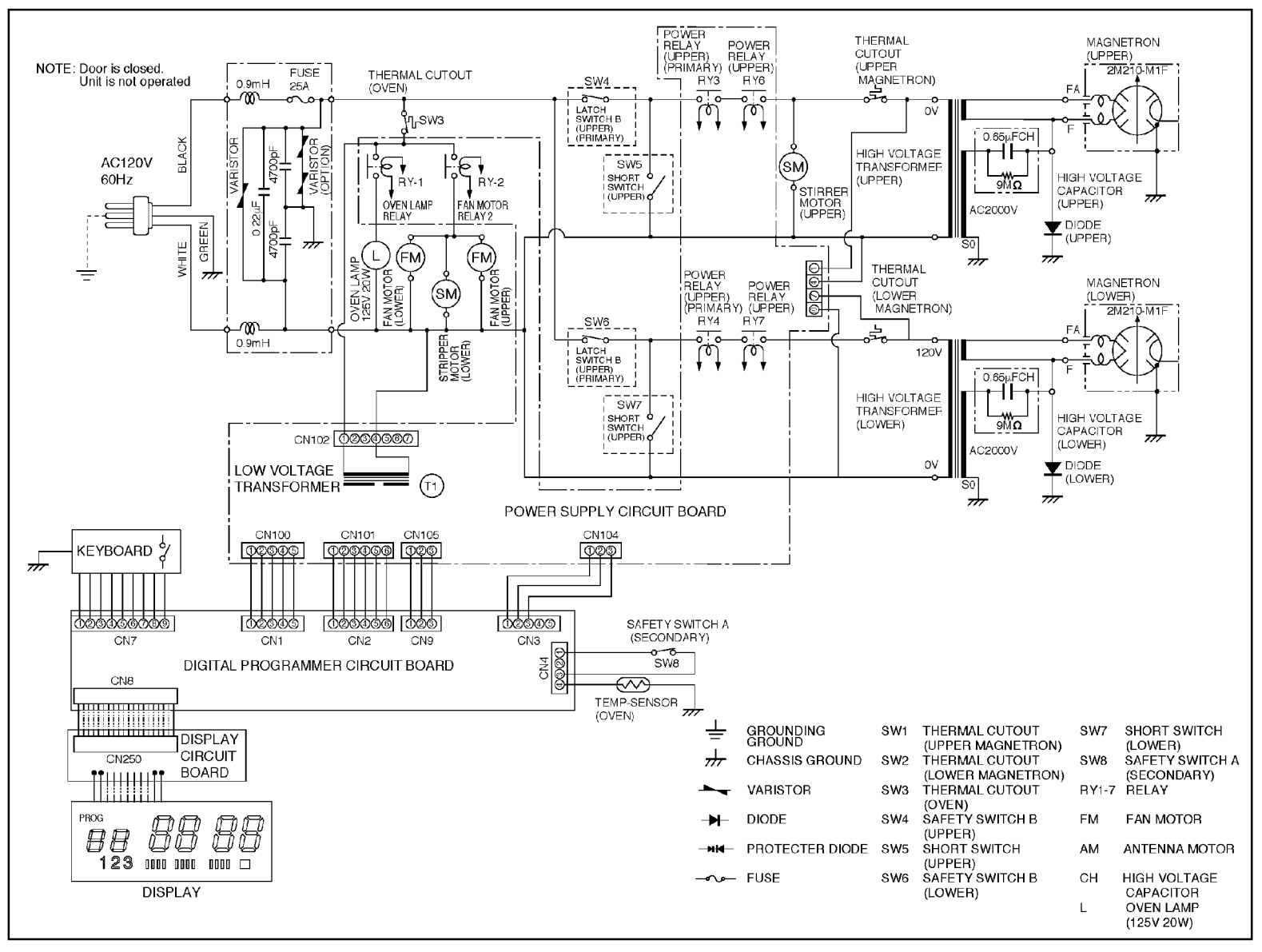
23. DIGITAL PROGRAMMER CIRCUIT

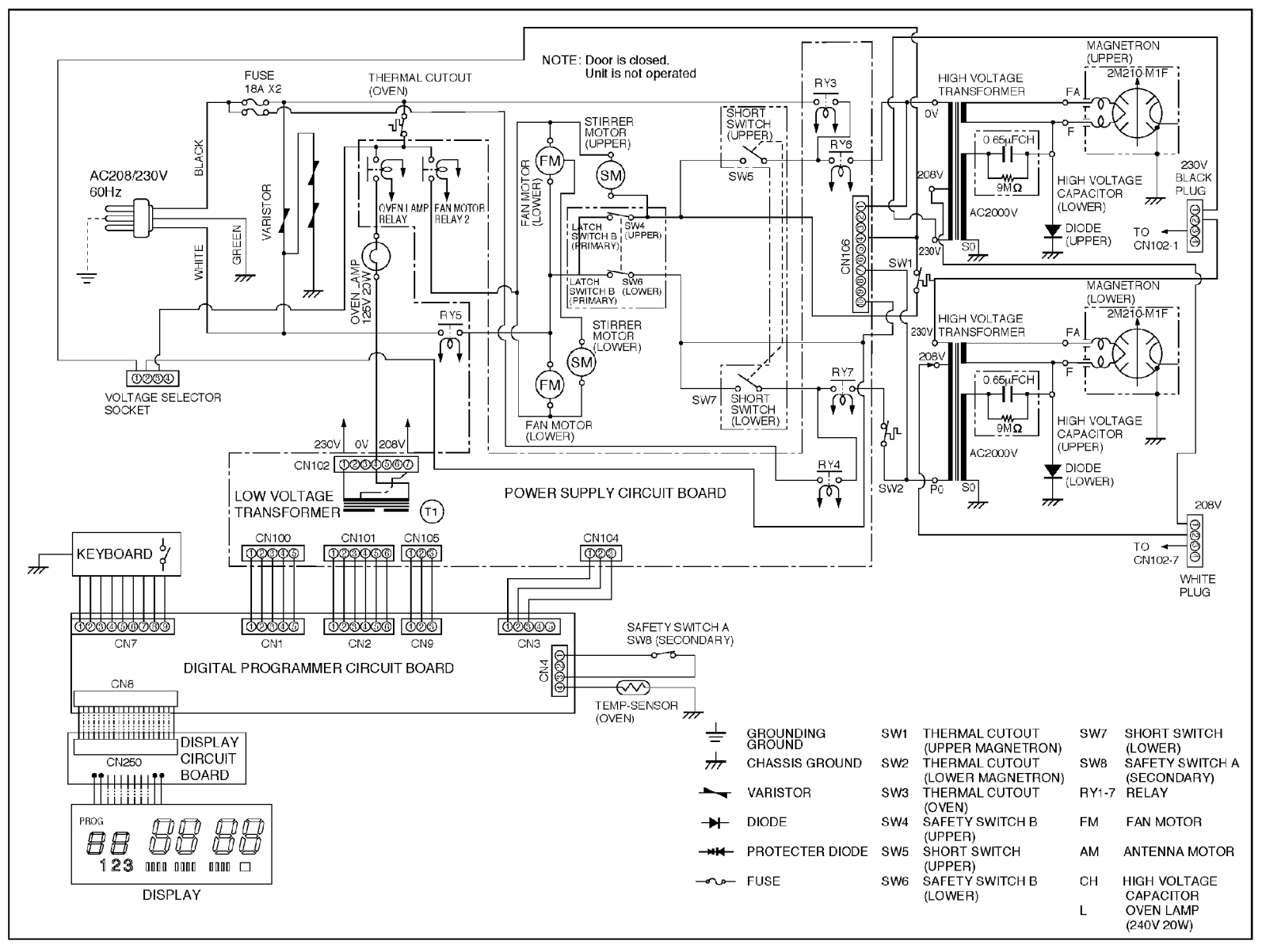
PARTS LIST

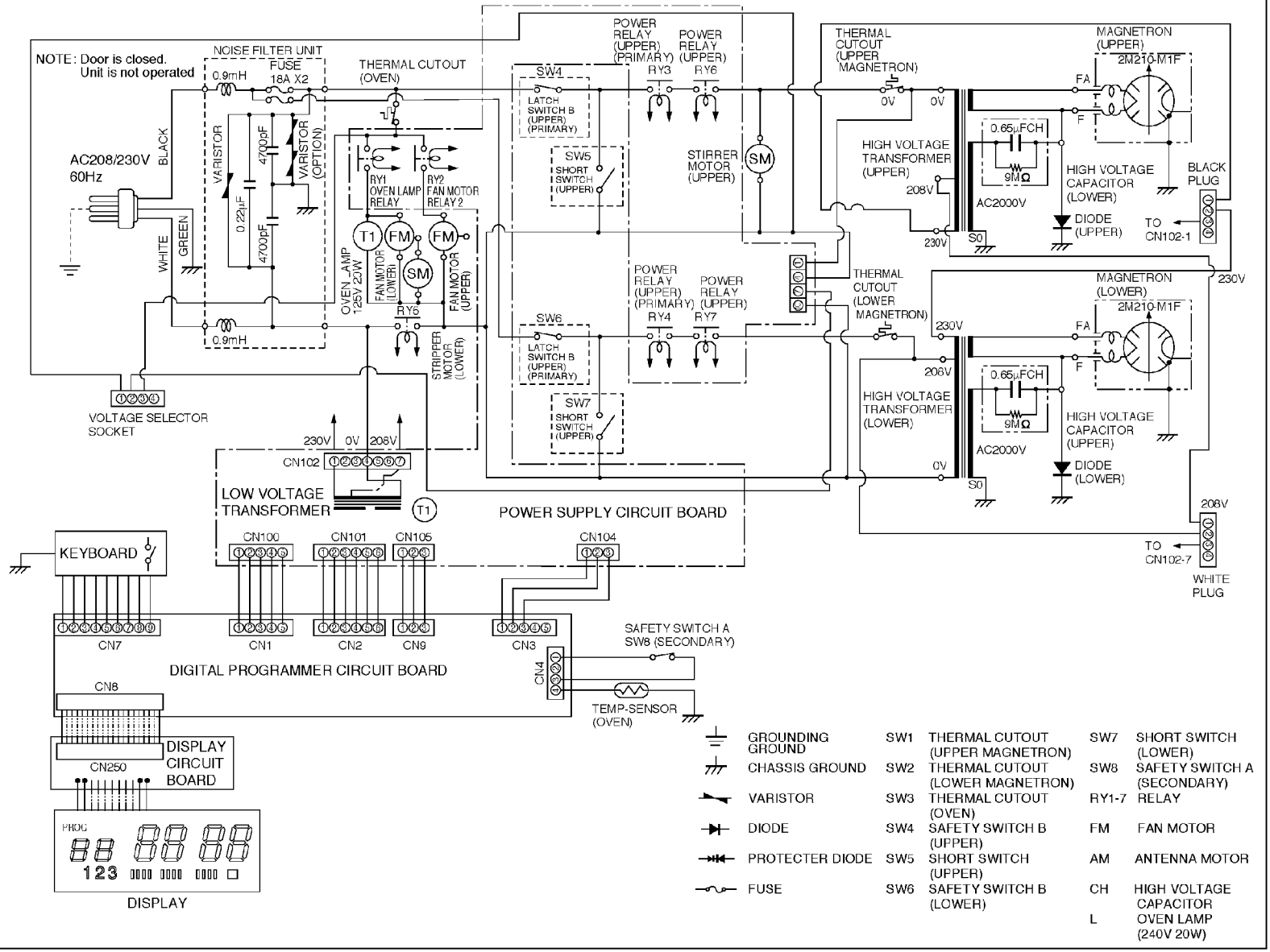
Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
BZ1	EFBRL37C20	BUZZER	1	3.7KHZ
C10 35 36 37	ECA1HM471B	ELECTROLYTIC CAPACITOR AL	4	470MF/50V
C11	ECA1HM221B	ELECTROLYTIC CAPACITOR AL	1	220MF/50V
C12 13 15 28 34	AECF50F104Z	CERAMIC CAPACITOR	5	0.1MF/50V
C14	ECEA1CKA100B	ELECTROLYTIC CAPACITOR AL	1	10MF/16V
C16 17 19 20 21 29	ECBT1E103ZF5	CERAMIC CAPACITOR	6	0.01MF/25V
C18	ECEA1HKA2R2B	ELECTROLYTIC CAPACITOR AL	1	2.2MF/50V
C30 31 32 33	ECBT1H101KB5	CERAMIC CAPACITOR	4	0.0001MF/50V
CN1	AEEMMF01F05W	CONNECTOR	1	5PIN
CN2	AEEMMF03F06W	CONNECTOR	1	6PIN
CN3	AEEMMF01F05R	CONNECTOR	1	5PIN RED
CN4	AEEMMF00D04W	CONNECTOR	1	4PIN
CN7	AEEM09FDZBTM	CONNECTOR	1	9PIN
CN8	AEEMHLEM21S	CONNECTOR	1	
CN9	AEEMMF00703R	CONNECTOR	1	3PIN RED
CX1	EFOGC4194T4	RESONATOR	1	4.19MHZ
D10 11 13	AEDNERA1502	DIODE SI	3	1.0A
D12	MA700A-(TA)	DIODE SI	1	0.03A
D14 15 16 17 18 19 20 21	MA196-(TA5)	DIODE SI	8	0.1A
IC1	AEIC38122283	IC	1	M38122
IC2	AN6752	IC	1	AN6752
IC3	AEICU2004GR2	IC	1	A2004G
IC4	AEICAT24C16N	IC	1	AT24C16N
Q1	AEGHPH0124BS	HEAT SINK	1	⚠PH0124B-S
Q1	2SD2012	TRANSISTOR SI 2W	1	2SD2012
Q2 3	2SA720RRTA	TRANSISTOR SI 400MW	2	
Q4	UN4115-(TA)	TRANSISTOR SI 300MW	1	UN4115
Q7	UN421F-(TA)	TRANSISTOR SI	1	UN421F
Q8 9 11	SD1991AQSTA	TRANSISTOR SI	3	2SD1991AQRS
Q10	UN4111-(TA)	TRANSISTOR SI 300MW	1	
R10 11	ERDS2TJ151T	CARBON FILM RESISTOR	2	150 Ω 1/4W 5%
R12 17 21 22 23 34 38 46 47 61 62 65	ERDS2TJ103T	CARBON FILM RESISTOR	12	10K Ω 1/4W 5%
R13	ERDS2TJ823T	CARBON FILM RESISTOR	1	82K Ω 1/4W 5%
R14	ERDS2TJ390T	CARBON FILM RESISTOR	1	39 Ω 1/4W 5%
R15 16 32 64	ERDS2TJ152T	CARBON FILM RESISTOR	4	1.5K Ω 1/4W 5%

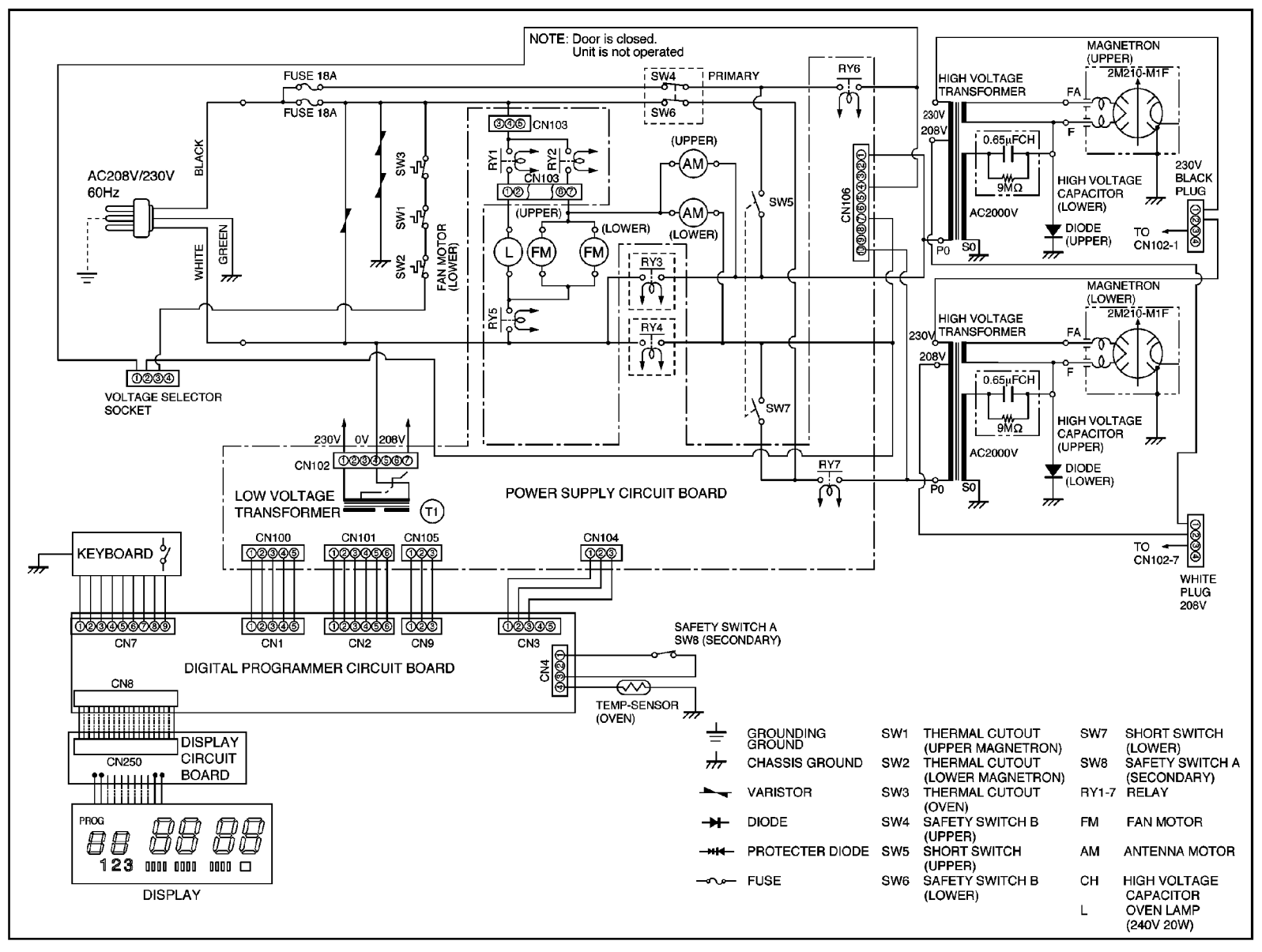
Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
R18 35 43 48 49 50 51 56 57 58 59 60	ERDS2TJ102T	CARBON FILM RESISTOR	12	1.0K Ω 1/4W 5%
R19	ERDS2TJ220T	CARBON FILM RESISTOR	1	22 Ω 1/4W 5%
R20	ERDS2FJ103T	CARBON FILM RESISTOR	1	10K Ω 1/4W 5%
R33 44	ERDS2TJ681T	CARBON FILM RESISTOR	2	680 Ω 1/4W 5%
R36	ERDS2TJ333T	CARBON FILM RESISTOR	1	33K Ω 1/4W 5%
R37 42 72	ERDS2TJ332T	CARBON FILM RESISTOR	3	3.3K Ω 1/4W 5%
R41 73	ERDS2TJ472T	CARBON FILM RESISTOR	2	4.7K Ω 1/4W 5%
R45	ERDS2TJ184T	CARBON FILM RESISTOR	1	180K Ω 1/4W 5%
R52 53 54 55	ERDS2TJ104T	CARBON FILM RESISTOR	4	100K Ω 1/4W 5%
R68 69	ERDS2TJ470T	CARBON FILM RESISTOR	2	47 Ω 1/4W 5%
ZD1	AEDZ4R7ES3T1	ZENNER DIODE SI	1	
ZD2	AEDZ5R6ES2T1	ZENNER DIODE SI	1	
ZD3	AEDZ24ES3T1	ZENNER DIODE SI	1	

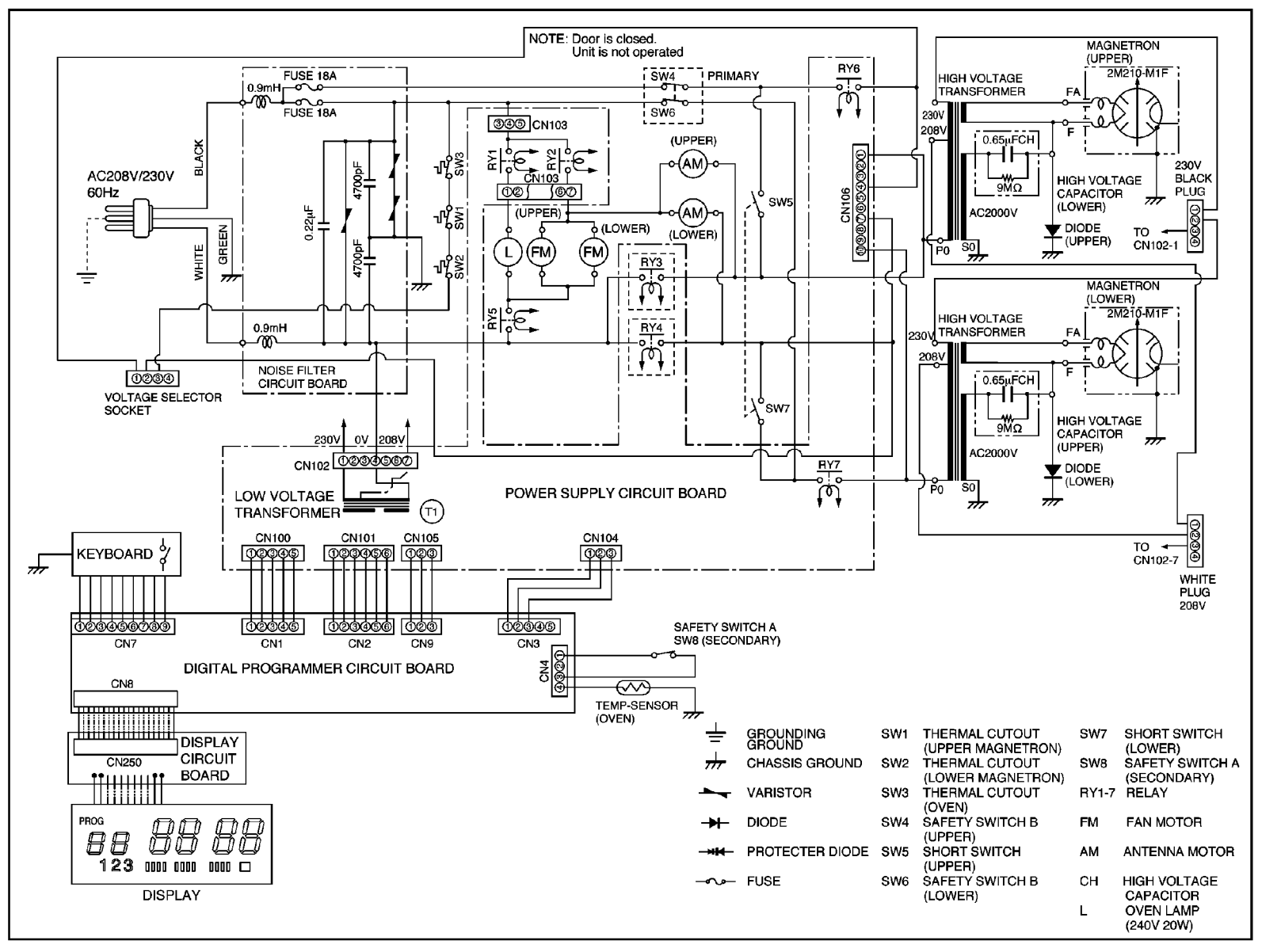

NOTE : Door is closed.
Unit is not operated
FUSE
25A
THERMAL CUTOUT
(OVEN)
SW3
AC120V
60Hz
BLACK
WHITE
GREEN
VARISTOR
OVEN LAMP RELAY
FAN MOTOR RELAY 2
OVEN LAMP
125V 20W
FAN MOTOR
(LOWER)
FM
STIRRER
MOTOR
(UPPER)
SM
LATCH
SWITCH B
(PRIMARY)
SW4
(UPPER)
LATCH
SWITCH B
(PRIMARY)
SW6
(LOWER)
STIRRER
MOTOR
(LOWER)
SM
FM
FAN MOTOR
(LOWER)
SHORT
SWITCH
(UPPER)
SW5
SW7
SHORT
SWITCH
(LOWER)
RY3
RY6
RY7
RY4
CN106
SW1
SW2
HIGH VOLTAGE
TRANSFORMER
0V
120V
P0
S0
AC2000V
0.65μFCH
9MΩ
HIGH VOLTAGE
CAPACITOR
(LOWER)
DIODE
(UPPER)
MAGNETRON
(UPPER)
2M210-M1F
FA
F
HIGH VOLTAGE
TRANSFORMER
0V
120V
P0
S0
AC2000V
0.65μFCH
9MΩ
HIGH VOLTAGE
CAPACITOR
(UPPER)
DIODE
(LOWER)
MAGNETRON
(LOWER)
2M210-M1F
FA
F
CN102
LOW VOLTAGE
TRANSFORMER
T1
POWER SUPPLY CIRCUIT BOARD
KEYBOARD
CN100
CN101
CN105
CN104
CN7
CN1
CN2
CN9
CN3
CN4
SAFETY SWITCH A
SW8 (SECONDARY)
TEMP-SENSOR
(OVEN)
DIGITAL PROGRAMMER CIRCUIT BOARD
CN8
DISPLAY
CIRCUIT
BOARD
CN250
PROG
DISPLAY
GROUNDING
GROUND
CHASSIS GROUND
VARISTOR
DIODE
PROTECTER DIODE
FUSE
SW1 THERMAL CUTOUT (UPPER MAGNETRON)
SW2 THERMAL CUTOUT (LOWER MAGNETRON)
SW3 THERMAL CUTOUT (OVEN)
SW4 SAFETY SWITCH B (UPPER)
SW5 SHORT SWITCH (UPPER)
SW6 SAFETY SWITCH B (LOWER)
SW7 SHORT SWITCH (LOWER)
SW8 SAFETY SWITCH A (SECONDARY)
RY1-7 RELAY
FM FAN MOTOR
AM ANTENNA MOTOR
CH HIGH VOLTAGE CAPACITOR
L OVEN LAMP (240V 25W)

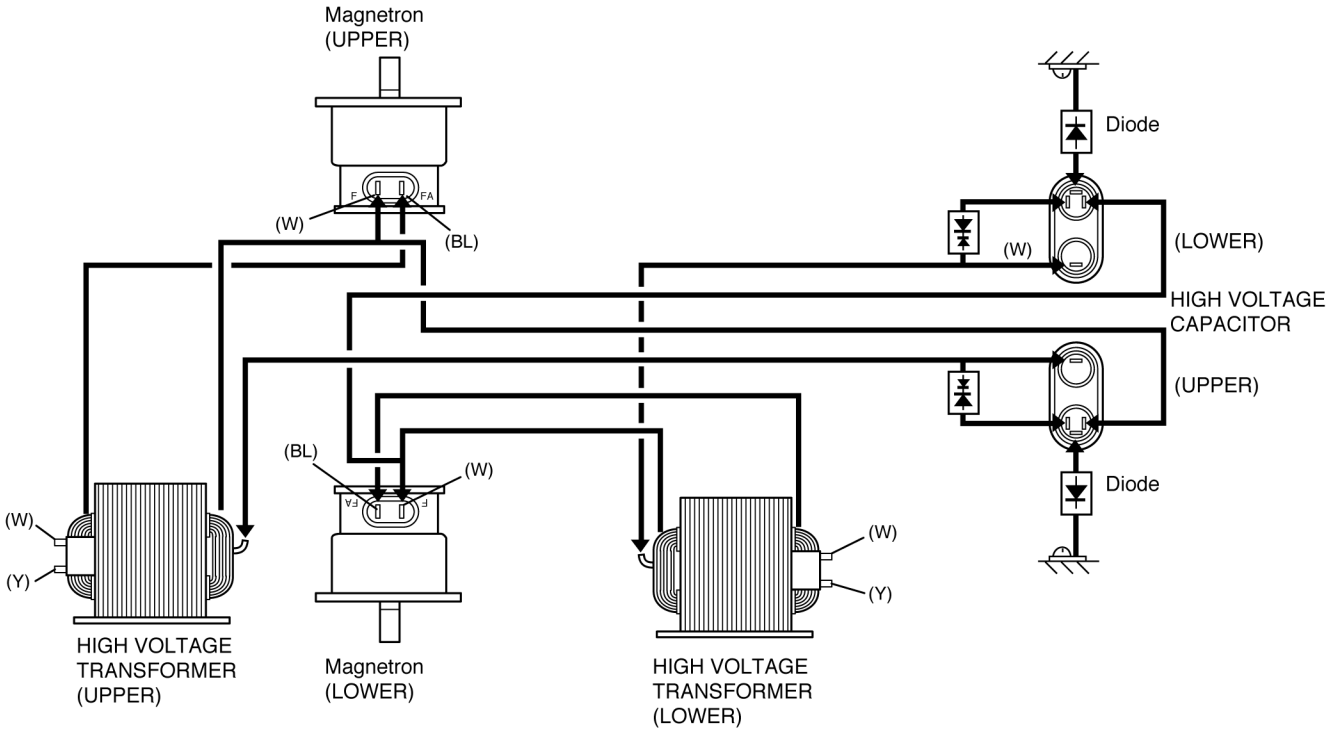

NOTE: Door is closed.
Unit is not operated
AC120V
60Hz
BLACK
WHITE
GREEN
VARISTOR
0.9mH
FUSE
25A
4700pF
0.22μF
4700pF
VARISTOR (OPTION)
0.9mH
THERMAL CUTOUT (OVEN)
SW3
RY-1
RY-2
OVEN LAMP RELAY
FAN MOTOR RELAY2
OVEN LAMP 125V 20W
FAN MOTOR (LOWER)
FAN MOTOR (UPPER)
STRIPPER MOTOR (LOWER)
SW4
LATCH SWITCH B (UPPER) (PRIMARY)
SW5
SHORT SWITCH (UPPER)
POWER RELAY (UPPER) (PRIMARY) RY3
POWER RELAY (UPPER) RY6
SM
STIRRER MOTOR (UPPER)
THERMAL CUTOUT (UPPER MAGNETRON)
0V
HIGH VOLTAGE TRANSFORMER (UPPER)
0.65μFCH
9MΩ
AC2000V
S0
HIGH VOLTAGE CAPACITOR (UPPER)
DIODE (UPPER)
MAGNETRON (UPPER)
2M210-M1F
FA
F
POWER RELAY (UPPER) (PRIMARY) RY4
POWER RELAY (UPPER) RY7
SW6
LATCH SWITCH B (UPPER) (PRIMARY)
SW7
SHORT SWITCH (UPPER)
THERMAL CUTOUT (LOWER MAGNETRON)
120V
HIGH VOLTAGE TRANSFORMER (LOWER)
0V
S0
HIGH VOLTAGE CAPACITOR (LOWER)
DIODE (LOWER)
MAGNETRON (LOWER)
2M210-M1F
CN102
LOW VOLTAGE TRANSFORMER
T1
POWER SUPPLY CIRCUIT BOARD
KEYBOARD
CN100
CN101
CN105
CN104
CN7
CN1
CN2
CN9
CN3
CN4
SAFETY SWITCH A (SECONDARY)
SW8
TEMP-SENSOR (OVEN)
DIGITAL PROGRAMMER CIRCUIT BOARD
CN8
CN250
DISPLAY CIRCUIT BOARD
PROG
123
DISPLAY
GROUNDING GROUND
CHASSIS GROUND
VARISTOR
DIODE
PROTECTER DIODE
FUSE
SW1 THERMAL CUTOUT (UPPER MAGNETRON)
SW2 THERMAL CUTOUT (LOWER MAGNETRON)
SW3 THERMAL CUTOUT (OVEN)
SW4 SAFETY SWITCH B (UPPER)
SW5 SHORT SWITCH (UPPER)
SW6 SAFETY SWITCH B (LOWER)
SW7 SHORT SWITCH (LOWER)
SW8 SAFETY SWITCH A (SECONDARY)
RY1-7 RELAY
FM FAN MOTOR
AM ANTENNA MOTOR
CH HIGH VOLTAGE CAPACITOR
L OVEN LAMP (125V 20W)


NOTE: Door is closed.
Unit is not operated
FUSE
18A X2
THERMAL CUTOUT
(OVEN)
AC208/230V
60Hz
BLACK
WHITE
GREEN
VARISTOR
OVEN 1 AMP RELAY
FAN MOTOR RELAY 2
OVEN LAMP
125V 20W
RY5
VOLTAGE SELECTOR SOCKET
STIRRER MOTOR (UPPER)
FAN MOTOR (LOWER)
LATCH SWITCH B (PRIMARY)
SW4 (UPPER)
LATCH SWITCH B (PRIMARY)
SW6 (LOWER)
STIRRER MOTOR (LOWER)
FAN MOTOR (LOWER)
SHORT SWITCH (UPPER)
SW5
RY3
RY6
CN106
SW1
SW7
SHORT SWITCH (LOWER)
RY7
RY4
SW2
230V 0V 208V
CN102
LOW VOLTAGE TRANSFORMER
T1
POWER SUPPLY CIRCUIT BOARD
HIGH VOLTAGE TRANSFORMER
0V
208V
230V
S0
0.65μFCH
9MΩ
AC2000V
MAGNETRON (UPPER)
2M210-M1F
FA
F
HIGH VOLTAGE CAPACITOR (LOWER)
DIODE (UPPER)
230V BLACK PLUG
TO CN102-1
HIGH VOLTAGE TRANSFORMER
230V
208V
P0
S0
MAGNETRON (LOWER)
2M210-M1F
HIGH VOLTAGE CAPACITOR (UPPER)
DIODE (LOWER)
208V
TO CN102-7
WHITE PLUG
KEYBOARD
CN100
CN101
CN105
CN104
CN7
CN1
CN2
CN9
CN3
CN4
DIGITAL PROGRAMMER CIRCUIT BOARD
SAFETY SWITCH A SW8 (SECONDARY)
TEMP-SENSOR (OVEN)
CN8
CN250
DISPLAY CIRCUIT BOARD
PROG
123
DISPLAY
GROUNDING GROUND
CHASSIS GROUND
VARISTOR
DIODE
PROTECTER DIODE
FUSE
SW1 THERMAL CUTOUT (UPPER MAGNETRON)
SW2 THERMAL CUTOUT (LOWER MAGNETRON)
SW3 THERMAL CUTOUT (OVEN)
SW4 SAFETY SWITCH B (UPPER)
SW5 SHORT SWITCH (UPPER)
SW6 SAFETY SWITCH B (LOWER)
SW7 SHORT SWITCH (LOWER)
SW8 SAFETY SWITCH A (SECONDARY)
RY1-7 RELAY
FM FAN MOTOR
AM ANTENNA MOTOR
CH HIGH VOLTAGE CAPACITOR
L OVEN LAMP (240V 20W)


NOTE : Door is closed.
Unit is not operated
NOISE FILTER UNIT
FUSE
18A X2
0.9mH
0.9mH
VARISTOR
4700pF
VARISTOR (OPTION)
0.22μF
4700pF
AC208/230V
60Hz
BLACK
WHITE
GREEN
THERMAL CUTOUT (OVEN)
RY1 OVEN LAMP RELAY
RY2 FAN MOTOR RELAY 2
T1
FM
FM
SM
OVEN LAMP 125V 20W
FAN MOTOR (LOWER)
FAN MOTOR (UPPER)
RY5
STRIPPER MOTOR (LOWER)
VOLTAGE SELECTOR SOCKET
SW4
LATCH SWITCH B (UPPER) (PRIMARY)
SW5
SHORT SWITCH (UPPER)
SW6
LATCH SWITCH B (UPPER) (PRIMARY)
SW7
SHORT SWITCH (UPPER)
POWER RELAY (UPPER) (PRIMARY) RY3
POWER RELAY (UPPER) RY6
POWER RELAY (UPPER) (PRIMARY) RY4
POWER RELAY (UPPER) RY7
STIRRER MOTOR (UPPER)
SM
THERMAL CUTOUT (UPPER MAGNETRON)
0V
0V
HIGH VOLTAGE TRANSFORMER (UPPER)
208V
230V
S0
0.65μF
CH
9MΩ
AC2000V
HIGH VOLTAGE CAPACITOR (LOWER)
DIODE (UPPER)
MAGNETRON (UPPER)
2M210-M1F
FA
F
BLACK PLUG
TO CN102-1
THERMAL CUTOUT (LOWER MAGNETRON)
230V
208V
0V
HIGH VOLTAGE TRANSFORMER (LOWER)
S0
0.65μF
CH
9MΩ
AC2000V
HIGH VOLTAGE CAPACITOR (UPPER)
DIODE (LOWER)
MAGNETRON (LOWER)
2M210-M1F
FA
F
230V
208V
TO CN102-7
WHITE PLUG
230V
0V
208V
CN102
LOW VOLTAGE TRANSFORMER
T1
POWER SUPPLY CIRCUIT BOARD
KEYBOARD
CN100
CN101
CN105
CN104
CN7
CN1
CN2
CN9
CN3
CN4
SAFETY SWITCH A SW8 (SECONDARY)
TEMP-SENSOR (OVEN)
DIGITAL PROGRAMMER CIRCUIT BOARD
CN8
CN250
DISPLAY CIRCUIT BOARD
PROG
123
DISPLAY
GROUNDING GROUND
CHASSIS GROUND
VARISTOR
DIODE
PROTECTER DIODE
FUSE
SW1 THERMAL CUTOUT (UPPER MAGNETRON)
SW2 THERMAL CUTOUT (LOWER MAGNETRON)
SW3 THERMAL CUTOUT (OVEN)
SW4 SAFETY SWITCH B (UPPER)
SW5 SHORT SWITCH (UPPER)
SW6 SAFETY SWITCH B (LOWER)
SW7 SHORT SWITCH (LOWER)
SW8 SAFETY SWITCH A (SECONDARY)
RY1-7 RELAY
FM FAN MOTOR
AM ANTENNA MOTOR
CH HIGH VOLTAGE CAPACITOR
L OVEN LAMP (240V 20W)

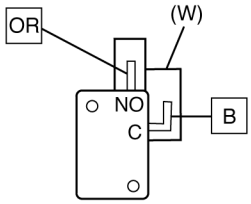

NOTE: Door is closed.
Unit is not operated
FUSE 18A
FUSE 18A
SW4
SW6
PRIMARY
RY6
MAGNETRON
(UPPER)
2M210-M1F
HIGH VOLTAGE
TRANSFORMER
FA
F
230V
208V
0.65μFCH
9MΩ
AC2000V
HIGH VOLTAGE
CAPACITOR
(LOWER)
230V
BLACK
PLUG
DIODE
(UPPER)
TO
CN102-1
P0
S0
AC208V/230V
60Hz
BLACK
WHITE
GREEN
SW3
SW1
SW2
FAN MOTOR
(LOWER)
CN103
RY1
RY2
(UPPER)
(LOWER)
AM
AM
SW5
CN106
L
FM
FM
RY3
RY4
RY5
SW7
MAGNETRON
(LOWER)
2M210-M1F
HIGH VOLTAGE
TRANSFORMER
HIGH VOLTAGE
CAPACITOR
(UPPER)
DIODE
(LOWER)
VOLTAGE SELECTOR
SOCKET
230V
0V
208V
CN102
LOW VOLTAGE
TRANSFORMER
T1
POWER SUPPLY CIRCUIT BOARD
RY7
TO
CN102-7
WHITE
PLUG
208V
KEYBOARD
CN100
CN101
CN105
CN104
CN7
CN1
CN2
CN9
CN3
CN4
SAFETY SWITCH A
SW8 (SECONDARY)
TEMP-SENSOR
(OVEN)
DIGITAL PROGRAMMER CIRCUIT BOARD
CN8
CN250
DISPLAY
CIRCUIT
BOARD
PROG
DISPLAY
GROUNDING
GROUND
CHASSIS GROUND
VARISTOR
DIODE
PROTECTER DIODE
FUSE
SW1 THERMAL CUTOUT (UPPER MAGNETRON)
SW2 THERMAL CUTOUT (LOWER MAGNETRON)
SW3 THERMAL CUTOUT (OVEN)
SW4 SAFETY SWITCH B (UPPER)
SW5 SHORT SWITCH (UPPER)
SW6 SAFETY SWITCH B (LOWER)
SW7 SHORT SWITCH (LOWER)
SW8 SAFETY SWITCH A (SECONDARY)
RY1-7 RELAY
FM FAN MOTOR
AM ANTENNA MOTOR
CH HIGH VOLTAGE CAPACITOR
L OVEN LAMP (240V 20W)


NOTE: Door is closed.
Unit is not operated
FUSE 18A
0.9mH
FUSE 18A
AC208V/230V
60Hz
BLACK
WHITE
GREEN
0.22μF
4700pF
4700pF
SW3
SW1
SW2
CN103
RY1
RY2
CN103
SW4
PRIMARY
SW6
RY6
(UPPER)
AM
(LOWER)
AM
SW5
CN106
(UPPER)
(LOWER)
L
FM
FM
RY3
RY4
RY5
0.9mH
NOISE FILTER
CIRCUIT BOARD
VOLTAGE SELECTOR
SOCKET
230V 0V 208V
CN102
LOW VOLTAGE
TRANSFORMER
T1
POWER SUPPLY CIRCUIT BOARD
SW7
RY7
MAGNETRON
(UPPER)
2M210-M1F
HIGH VOLTAGE
TRANSFORMER
230V
208V
FA
F
0.65μFCH
9MΩ
AC2000V
HIGH VOLTAGE
CAPACITOR
(LOWER)
DIODE
(UPPER)
P0
S0
230V
BLACK
PLUG
TO
CN102-1
MAGNETRON
(LOWER)
2M210-M1F
HIGH VOLTAGE
TRANSFORMER
230V
208V
FA
F
0.65μFCH
9MΩ
AC2000V
HIGH VOLTAGE
CAPACITOR
(UPPER)
DIODE
(LOWER)
P0
S0
TO
CN102-7
WHITE
PLUG
208V
KEYBOARD
CN100
CN101
CN105
CN104
CN7
CN1
CN2
CN9
CN3
CN4
DIGITAL PROGRAMMER CIRCUIT BOARD
SAFETY SWITCH A
SW8 (SECONDARY)
TEMP-SENSOR
(OVEN)
CN8
CN250
DISPLAY
CIRCUIT
BOARD
PROG
DISPLAY
GROUNDING
GROUND
CHASSIS GROUND
VARISTOR
DIODE
PROTECTER DIODE
FUSE
SW1 THERMAL CUTOUT (UPPER MAGNETRON)
SW2 THERMAL CUTOUT (LOWER MAGNETRON)
SW3 THERMAL CUTOUT (OVEN)
SW4 SAFETY SWITCH B (UPPER)
SW5 SHORT SWITCH (UPPER)
SW6 SAFETY SWITCH B (LOWER)
SW7 SHORT SWITCH (LOWER)
SW8 SAFETY SWITCH A (SECONDARY)
RY1-7 RELAY
FM FAN MOTOR
AM ANTENNA MOTOR
CH HIGH VOLTAGE CAPACITOR
L OVEN LAMP (240V 20W)

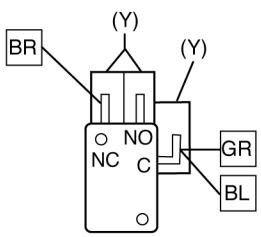


WIRING DIAGRAM

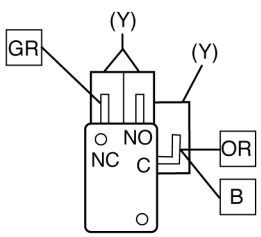
NOTE: *When replacing, check the lead wire color as shown.
*Colors shown by ( ) indicate colors of lead wire connector housing.



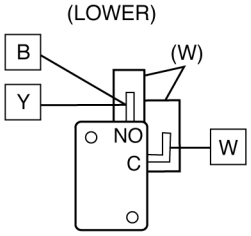
SAFETY SWITCH A



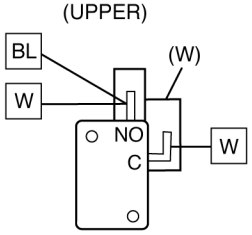
SHORT
SWITCH
(LOWER)



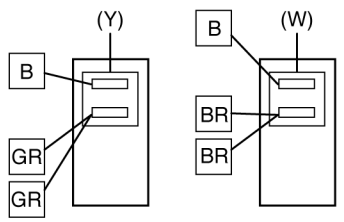
SHORT
SWITCH
(UPPER)



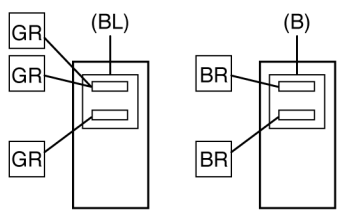
SAFETY
SWITCH B
(LOWER)



SAFETY
SWITCH B
(UPPER)



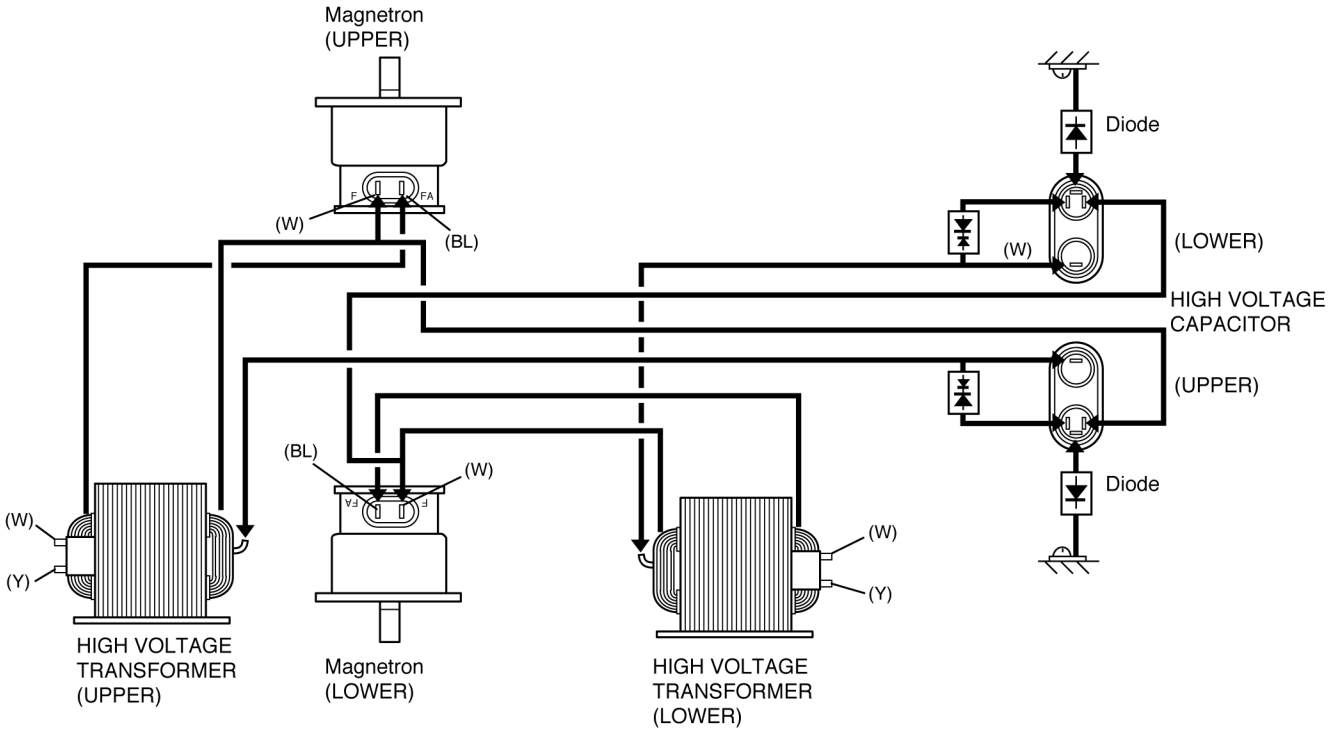
RY3 RY4



RY6 RY7

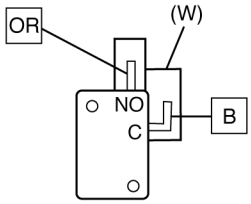
SYMBOL	COLOUR
B	BLACK
R	RED
OR	ORANGE
GR	GRAY
BR	BROWN
Y	YELLOW
BL	BLUE
W	WHITE

M109

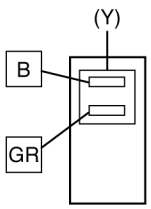


WIRING DIAGRAM

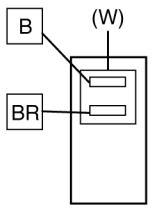
NOTE: *When replacing, check the lead wire color as shown.
*Colors shown by ( ) indicate colors of lead wire connector housing.



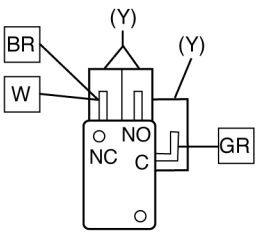
SAFETY SWITCH A



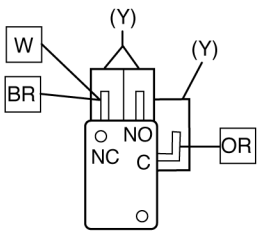
RY3



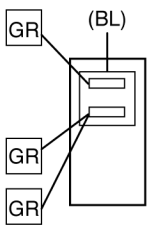
RY4



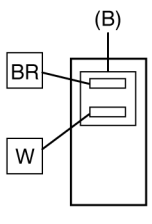
SHORT
SWITCH
(LOWER)



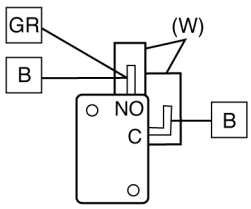
SHORT
SWITCH
(UPPER)



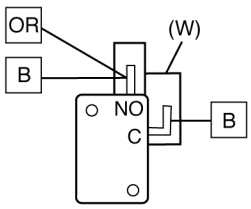
RY6



RY7



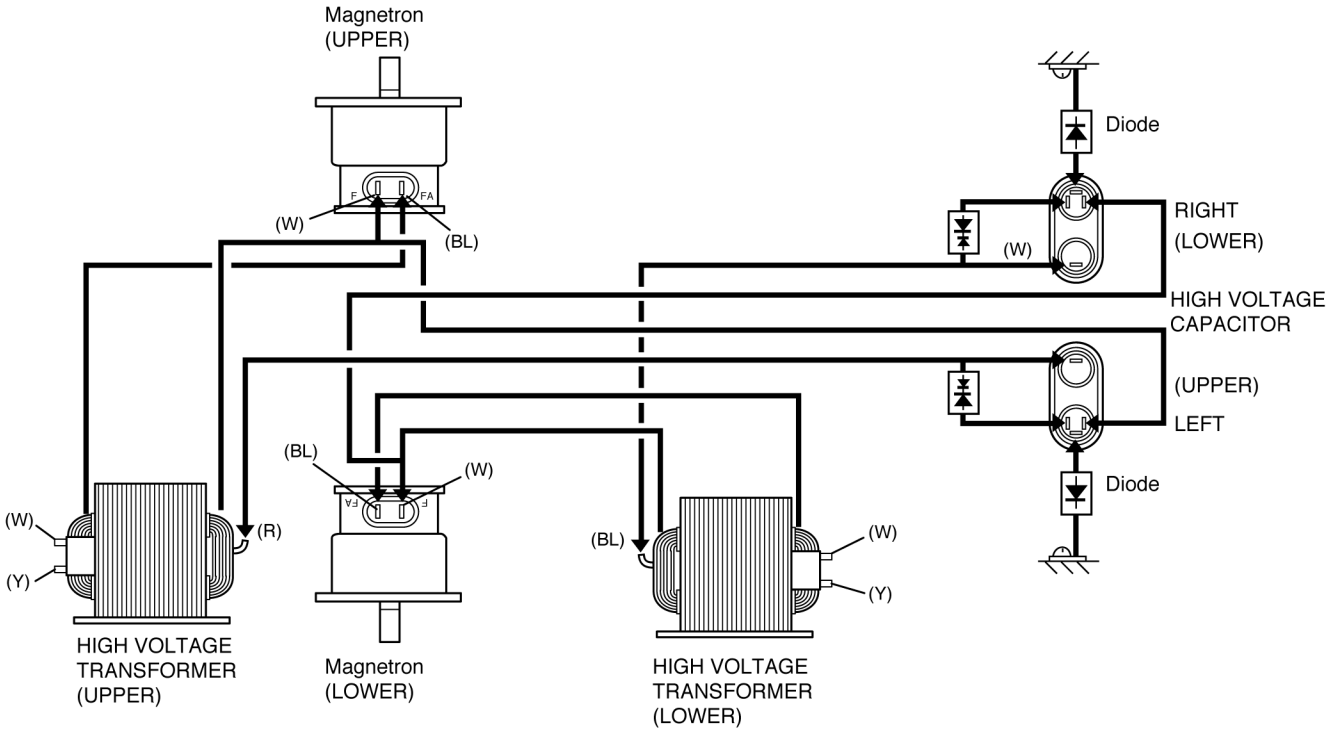
SAFETY
SWITCH B
(LOWER)



SAFETY
SWITCH B
(UPPER)

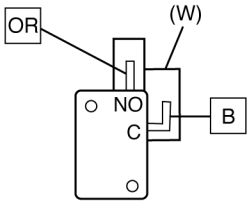
SYMBOL	COLOUR
B	BLACK
R	RED
OR	ORANGE
GR	GRAY
BR	BROWN
Y	YELLOW
BL	BLUE
W	WHITE

M110

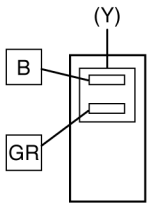


WIRING DIAGRAM

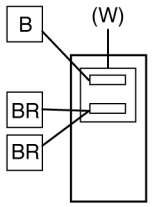
NOTE: *When replacing, check the lead wire color as shown.
*Colors shown by ( ) indicate colors of lead wire connector housing.



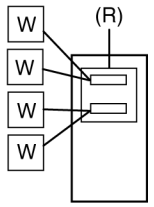
SAFETY SWITCH A



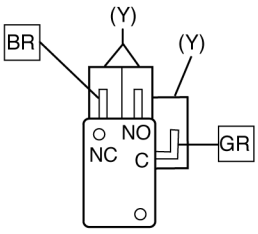
RY3



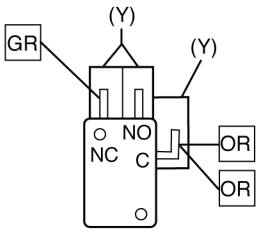
RY4



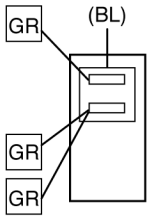
RY5



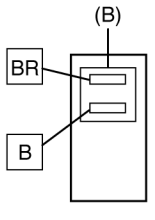
SHORT
SWITCH
(LOWER)



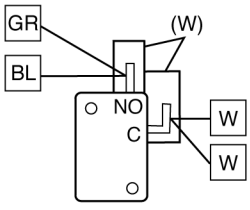
SHORT
SWITCH
(UPPER)



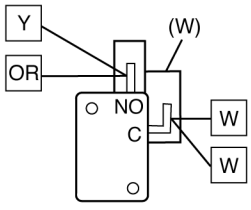
RY6



RY7



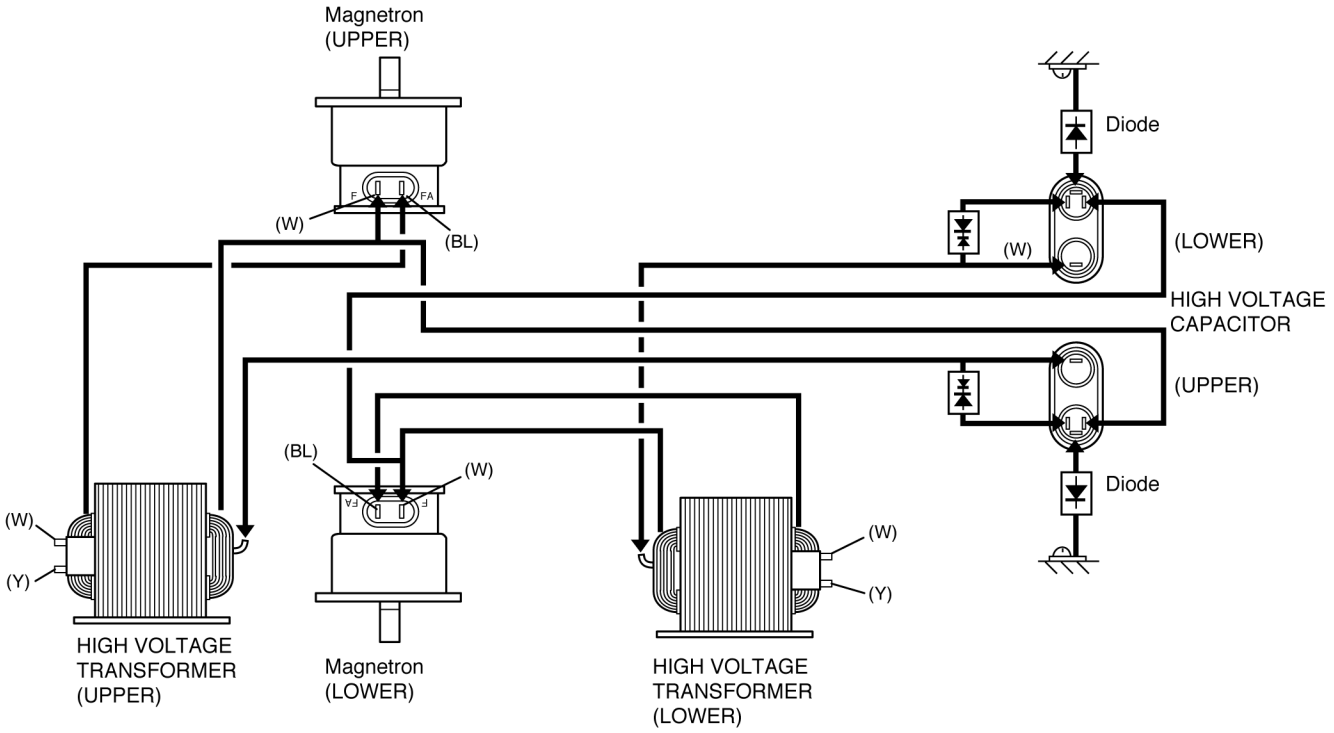
SAFETY
SWITCH B
(LOWER)



SAFETY
SWITCH B
(UPPER)

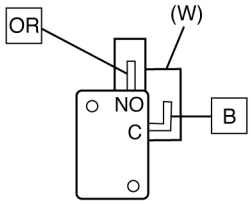
SYMBOL	COLOUR
B	BLACK
R	RED
OR	ORANGE
GR	GRAY
BR	BROWN
Y	YELLOW
BL	BLUE
W	WHITE

M111

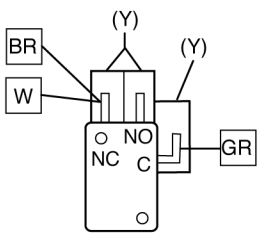


WIRING DIAGRAM

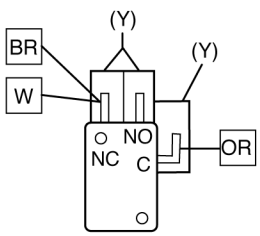
NOTE: *When replacing, check the lead wire color as shown.
*Colors shown by ( ) indicate colors of lead wire connector housing.



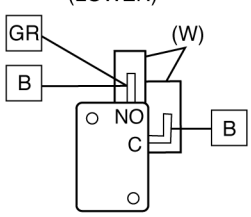
SAFETY SWITCH A



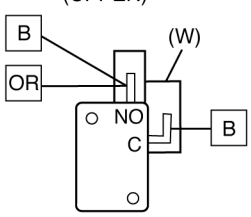
SHORT
SWITCH
(LOWER)



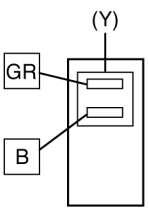
SHORT
SWITCH
(UPPER)



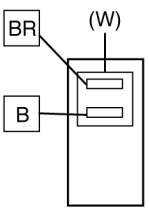
SAFETY
SWITCH B
(LOWER)



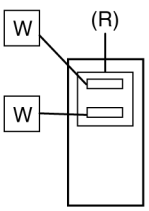
SAFETY
SWITCH B
(UPPER)



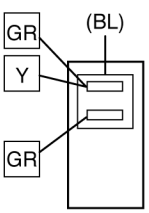
RY3



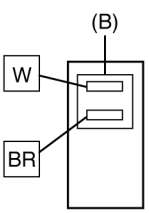
RY4



RY5



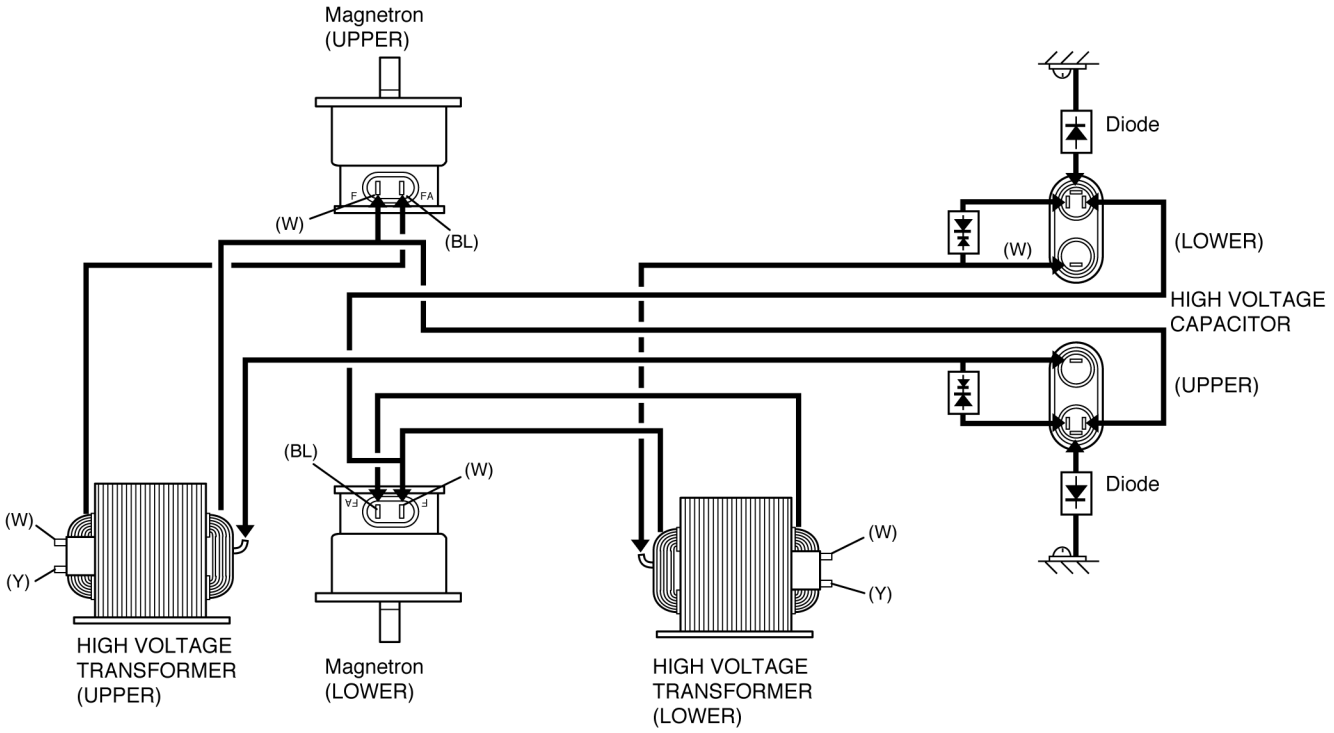
RY6



RY7

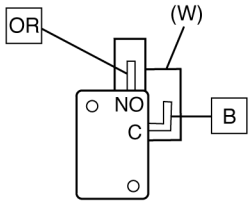
SYMBOL	COLOUR
B	BLACK
R	RED
OR	ORANGE
GR	GRAY
BR	BROWN
Y	YELLOW
BL	BLUE
W	WHITE

M112

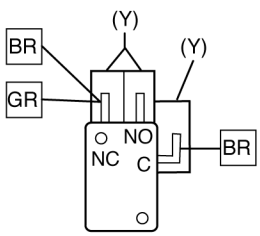


WIRING DIAGRAM

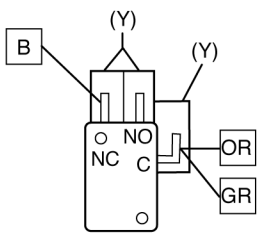
NOTE: *When replacing, check the lead wire color as shown.
*Colors shown by ( ) indicate colors of lead wire connector housing.



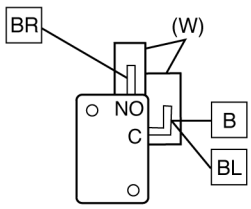
SAFETY SWITCH A



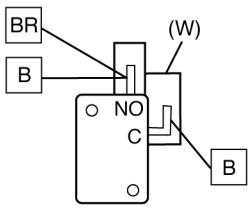
SHORT
SWITCH
(LOWER)



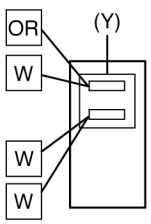
SHORT
SWITCH
(UPPER)



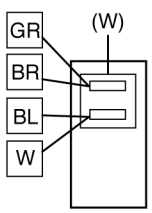
SAFETY
SWITCH B
(LOWER)



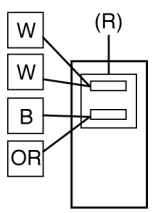
SAFETY
SWITCH B
(UPPER)



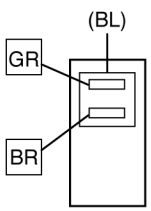
RY3



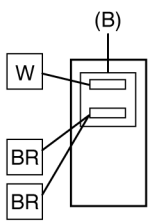
RY4



RY5



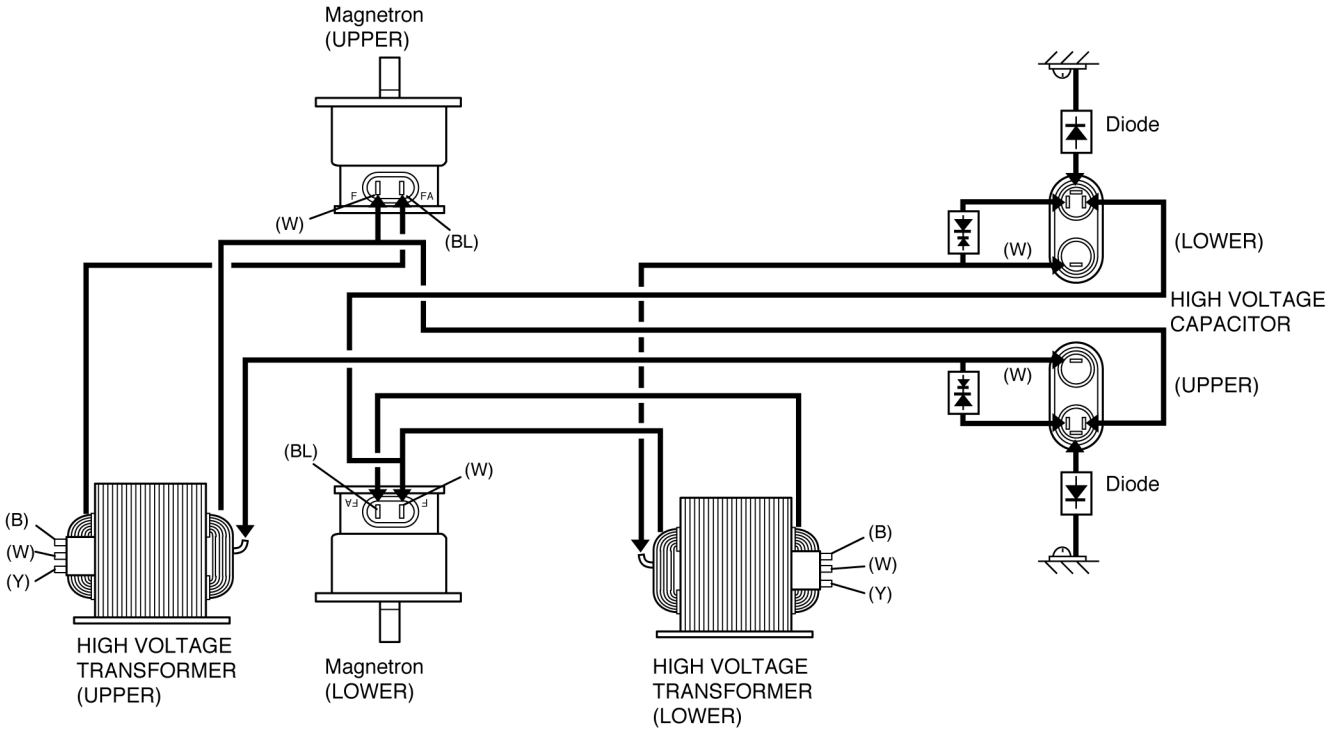
RY6



RY7

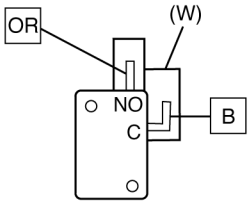
SYMBOL	COLOUR
B	BLACK
R	RED
OR	ORANGE
GR	GRAY
BR	BROWN
Y	YELLOW
BL	BLUE
W	WHITE
PK	PINK

M113

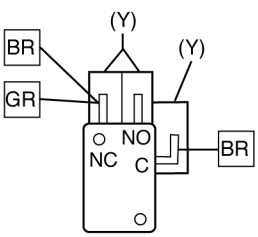


WIRING DIAGRAM

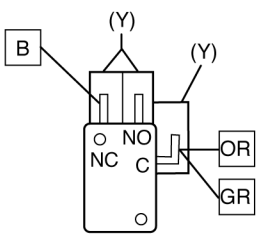
NOTE: *When replacing, check the lead wire color as shown.
*Colors shown by ( ) indicate colors of lead wire connector housing.



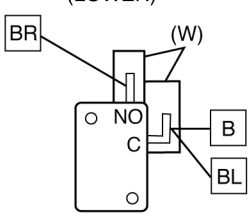
SAFETY SWITCH A



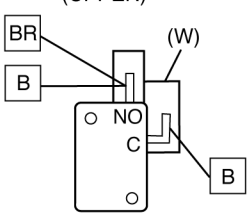
SHORT
SWITCH
(LOWER)



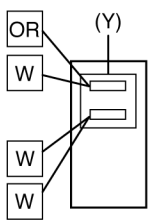
SHORT
SWITCH
(UPPER)



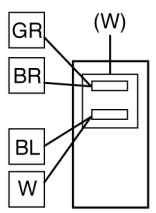
SAFETY
SWITCH B
(LOWER)



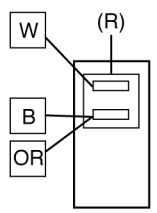
SAFETY
SWITCH B
(UPPER)



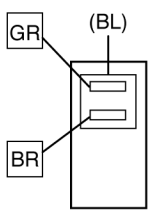
RY3



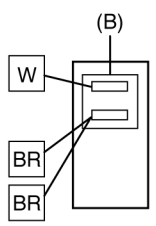
RY4



RY5



RY6



RY7

SYMBOL	COLOUR
B	BLACK
R	RED
OR	ORANGE
GR	GRAY
BR	BROWN
Y	YELLOW
BL	BLUE
W	WHITE
PK	PINK

M114